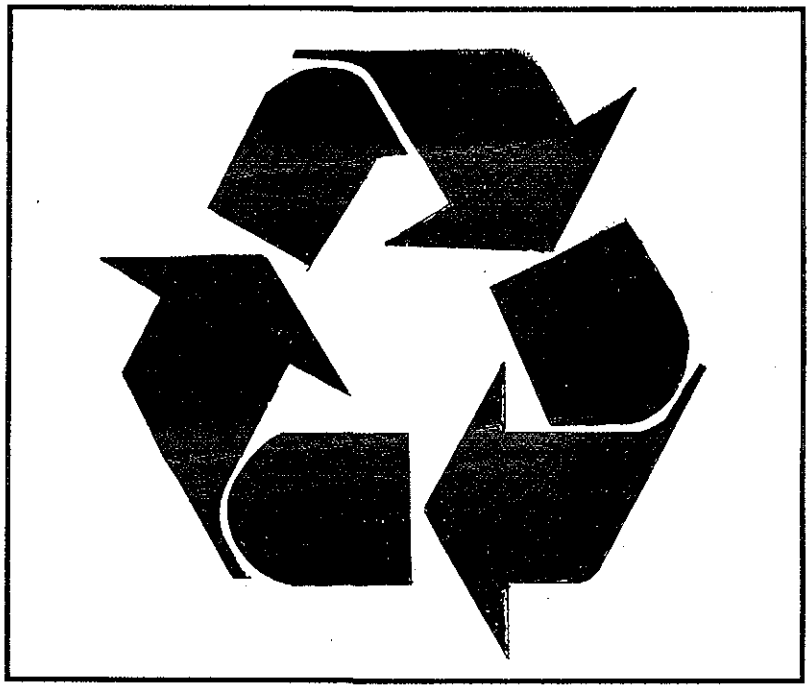
Buffumville Lake Flood Control Project

Solid Waste Management Plan

RECYCLE CONSERVE RESOURCES



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There are a number of federal, state, and local laws and regulations relating to solid waste management. This plan provides guidance to establish policies, responsibilities, procedures, and instructions for proper handling, storage, disposal and recycling of solid waste generated at the flood control project. Solid wastes include petroleum, oil and lubricants (POLs), hazardous waste, paper, beverage containers, woody debris, and various other wastes.

This plan was developed from a literature search and review of federal, state, and local requirements and existing and anticipated waste streams. This plan is not a complete treatise on environmental laws and regulations. It is list of solid waste regulations, policies, and references that may apply to the flood control project and a codification of existing and enhanced procedures for solid waste management.

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SOLID WASTE MANAGEMENT PLAN

BUFFUMVILLE LAKE FLOOD CONTROL PROJECT

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for
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November 1995

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION
WALTHAM, MASSACHUSETTS 02254

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GENERAL

1-1 Introduction

This plan is the Solid Waste Management Plan including, hazardous waste, petroleum, oil, and lubricants (POLs), and recycling plan for the Buffumville Lake Flood Control Project located in Oxford, Dudley, and Charlton, Massachusetts.

1-2 Purpose

This plan provides guidance to establish policies, responsibilities, procedures, and instructions for proper handling, storage, disposal and recycling of all solid waste generated at the project. Solid wastes include petroleum, oil and lubricants (POLs), hazardous waste, paper, beverage containers, woody debris, and various other wastes.

This plan was developed from a literature search and review of federal, state, and local requirements and existing and anticipated waste streams. This plan is not a complete treatise on environmental laws and regulations. It is list of solid waste regulations, policies, and references that may apply to the flood control project and a codification of existing and enhanced procedures for solid waste management.

1-3 Flood Control Project Description

Buffumville Lake Flood Control Project is located in the south-central part of Massachusetts, approximately 45 miles southwest of Boston (See Figure 1). The project is 1 of 6 flood control reservoirs constructed by the Corps of Engineers in the Thames River Basin. Buffumville dam is located on the Little River in Charlton, about 1.3 miles above its junction with the French River. Project lands are located in Oxford, Charlton, and Dudley (mostly in Charlton). This project was constructed by the Corps as a dual-purpose project with flood control and recreational uses and began operation in 1958.

The Buffumville Lake project consists of a rolled earthfill embankment, with a concrete spillway, outlet works, and storage capacity for recreation and flood control. The dam is 3,255 feet long and has a maximum height of 66 feet. Top width of the dam is 20

feet. The concrete spillway has a crest length of 220 feet; crest elevation is 524 feet NGVD (National Geodetic Vertical Datum of 1929), and is joined to the earth dam by concrete gravity walls at each end. The outlet works, located in the center of the spillway, consist of three 3-foot wide by 4-foot 6-inch high gated rectangular conduits, with inverts at elevation 481.5 feet NGVD. Flow through the outlets is controlled by three electronically operated slide gates. There is a log boom located upstream of the dam to catch any woody and other debris which might foul the outlet works.

When filled to spillway crest elevation, 524.0 feet NGVD, the reservoir has a total capacity of 12,700 acre-feet, equivalent to 9.0 inches of runoff from the 26.5-square mile drainage area. The reservoir length, at spillway crest, formed by this 530 acre pool is three miles. A recreation pool of 200 acres at an elevation of 492.5 feet NGVD is permanently maintained, and has a maximum depth of 11 feet.

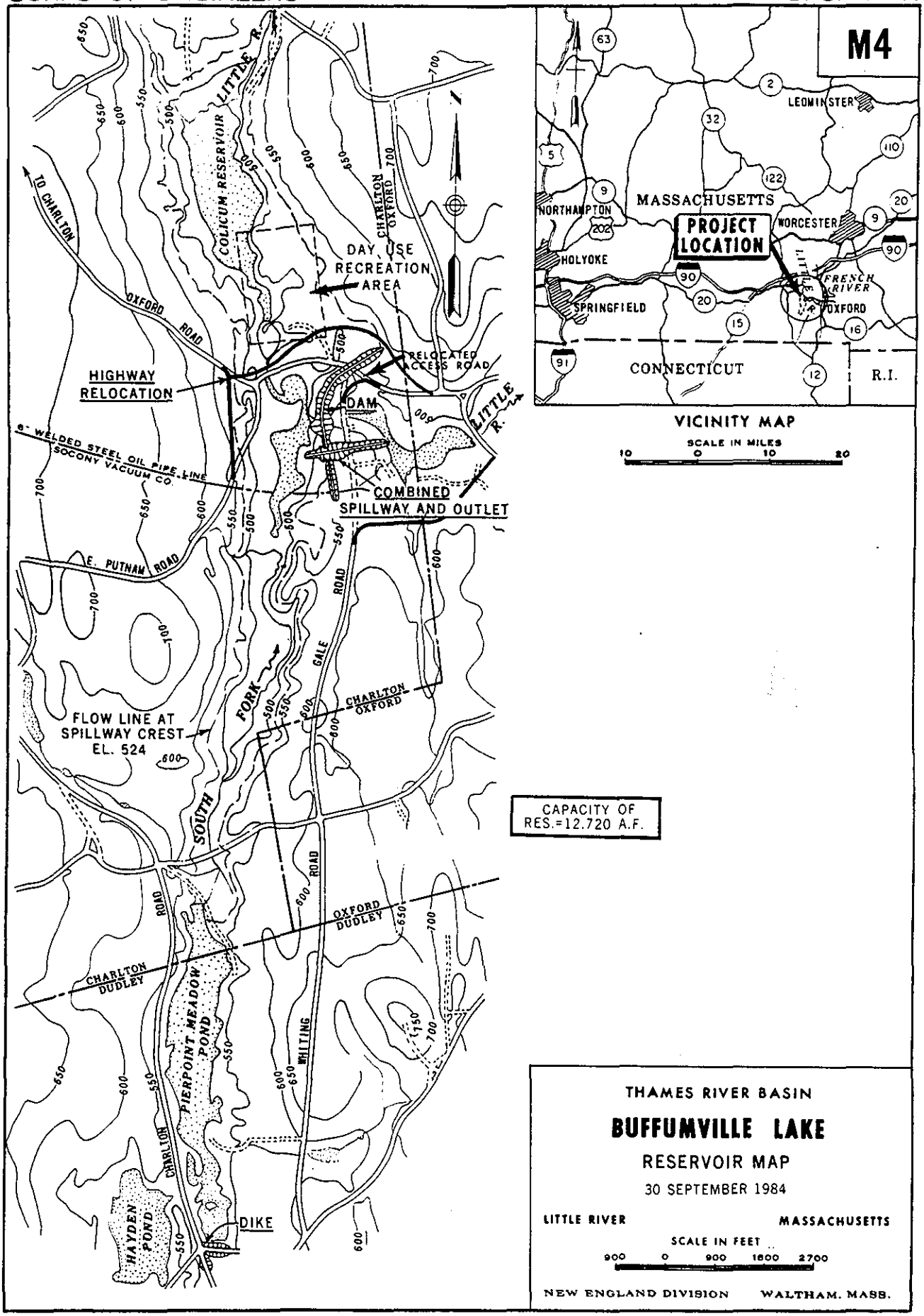
Buffumville Lake provides a variety of recreational opportunities, including scenic trails, boating facilities, a picnic shelter, and swimming beach. The reservoir offers warm water fishing for bass, pickerel, northern pike, and other species.

1-4 Overview of Solid Waste Generation

Facilities at the project that are potential waste generators or waste storage areas include the project office, utility building, storage building, garage/vehicles, control building at the dam, log boom, recreation areas (swimming beach/picnic area and boat launch), and project lands where there can be illegal dumping of trash.

There are no active on-site landfills. The burial of solid waste is not permitted. Except for yard waste or woody debris, which may be composted on site, virtually all solid waste generated in the project area is carried out under the provisions of maintenance and disposal contracts. Non-hazardous recyclable materials may be brought to the Corps Division warehouse for transfer to a recycling center or brought directly to a local recycling center by project staff. Activities such as a automobile maintenance are usually conducted off-site by a licensed service station. Minimal hazardous wastes are generated at the project. (See Appendix A.)

CORPS OF ENGINEERS U. S. ARMY



THAMES RIVER BASIN

BUFFUMVILLE LAKE

RESERVOIR MAP

30 SEPTEMBER 1984

LITTLE RIVER MASSACHUSETTS

SCALE IN FEET

900 0 900 1800 2700

NEW ENGLAND DIVISION WALTHAM, MASS.

FIGURE 1

LAWS, REGULATIONS, and DIRECTIVES

2-1 Federal

The following is a list of pertinent Federal Statutes and Regulations, Executive Orders, Department of Defense Directives, Department of the Army Regulations and Corps of Engineer Regulations. This list should be updated periodically as laws and regulations are modified and reviewed by legal counsel, as appropriate, to determine the completeness and applicability of the list.

Statutes

Resource Conservation and Recovery Act (RCRA) of 1976, PL94-580, as amended
Subtitle C - Hazardous Waste Management
Subtitle D - State or Regional Solid Waste Management Plans

Toxic Substance Control Act (TSCA) of 1976, Public Law 94-469, as amended.

Federal Facilities Compliance Act (FFCA) of 1992, P.L. 102-386.

Code of Federal Regulations

U.S. Department of Transportation (DOT) Hazardous Materials Regulations (Title 49 CFR, Part 172).

U.S. Environmental Protection Agency (EPA) Protection of the Environment, Hazardous Waste Management Regulations (Title 40 CFR, 260-266).

U.S. Environmental Protection Agency (EPA) Protection of the Environment, Solid Waste Management Regulations (Title 40 CFR, 240-258).

Department of Defense Directives

DoD 4160.21-M, Defense Utilization and Disposal Manual, September 1982, as

amended.

DoD Directive Number 4165.60, Solid Waste Management, dated 4 Oct 74.

Department of the Army Regulations

AR 200-1, Environmental Protection and Enhancement, 23 April 1990, Chapter 5 (Hazardous Material Management Program) and Chapter 6 (Solid Waste and Hazardous Waste Management Program).[1]

AR 420-47, Solid and Hazardous Waste Management, 1 December 1984.

Executive Orders

Executive Order 12088, Federal Compliance with Pollution Standards

Executive Order 12780, Federal Agency Recycling and the Council of Federal Recycling and Procurement Policy, Nov 4,1991.

Executive Order 12873, Federal Acquisition, Recycling, and Waste Prevention, Oct 22, 1993.

Executive Order 12843, Procurement Requirements and Policies for Federal Agencies for Ozone Depleting Substances, April 21, 1993.

Executive Order 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements, August 3, 1993.

Executive Order 12902, Energy Efficiency and Water Conservation at Federal Facilities, March 8, 1994.

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[1] Army Regulation 200-1. Applicability. This regulation does not apply to those civil works activities under the jurisdiction of the Secretary of the Army and implemented by the U. S. Army Corps of Engineers. However, it is anticipated that in the future a Corps Engineering Regulation similar to this regulation will be published.

Memoranda

Memorandum, CECC-ZA, dated 30 October 1992, Subject: Federal facilities Compliance Act (FFCA).

Memorandum, CECW-OA, dated 24 Nov 1992, Subject: USACE Facilities Environmental Compliance Letter No. 1, Solid Waste Recycling.

Memorandum, CECW-OA, dated 25 August 1993, Subject: Hazardous Waste Manifest Policy and Procedures.

Memorandum, CEMP-CP, dated 4 May 1995, Subject Hazardous Waste Manifest Signature Policy and Procedures.

Memorandum, CECW-OA, dated 22 February 1995, USACE Facilities Environmental Compliance Guidance Letter No. 2 Federal facilities Compliance Act (FFCA) of 1992, Fines and Penalties at Civil Works Funded Projects, Facilities and Activities.

Reports

USACERL Special Report - EC 95/05, dated Nov 94, titled "Environmental Assessment and Management Team Guide" (ERGO)

USACERL Special Report - EC 95/07, dated Nov 94, titled "Environmental Review Guide for Operations" (ERGO), "Supplement for the Environmental Assessment and Management Team Guide".

2-2 Commonwealth of Massachusetts

The Federal government sets minimum national standards for solid waste disposal, but state and local governments are responsible for implementing and enforcing programs. The following is a list of pertinent state of Massachusetts Statues, Regulations, and Reports.

General Laws

Massachusetts General Laws, Chapter 21C, Hazardous Waste Management Act.

Massachusetts General Laws, Chapter 21H, Solid Waste Facilities Act.

Code of Massachusetts Regulations (CMR)

CMR Title 310 - Chapter 19 - Solid Waste Management Regulations, July 1990, as amended.

CMR Title 310 - Chapter 30 - Hazardous Waste Regulations, July 1982, as amended.

Reports

Massachusetts Solid Waste Management Plan, 1995 update, dated June 29, 1995.

2-3 Local

The Towns of Charlton, Dudley, and Oxford do not have any local solid waste management regulations. Neither community operates a landfill. Recycling in these communities is on a voluntary basis. The Town of Dudley has a recycling/transfer station that locals can use for an annual fee.

2-4 Applicability

Federal Facilities Compliance Act of 1992. (P.L.- 102-386) This act provides for a waiver of sovereign immunity with respect to federal, state, and local procedural and substantive requirements relating to RCRA solid and hazardous waste laws and regulations.

Additionally in its passage of the Act, Congress clearly intended to subject Federal facilities to penalties and fines arising from violation of these laws.

Recycling requirements. (40 CFR 246.200-1 and 246.202-1, DoDD 4165.60, Executive Order 12873, CECW-OA-memorandum-24-November-92.) According to direction provided in these regulations, Corps facilities should participate in any state or local recycling program and reduce the volume of waste materials at the source whenever practical. Facilities with over 100 office workers are required to recover high grade paper. Agencies are also required to set goals for increasing the procurement of recycled and environmentally preferable products.

2-5 Suggested Policy Guidelines

Suggested policy guidelines for management of solid wastes including Petroleum, Oil, and Lubricants (POLs) waste liquid and hazardous waste are as follows:

a. The quantity of solid waste should be reduced at the source whenever possible.

b. Appropriate components of the waste stream should be recycled or composted to the fullest extent possible.

c. Non-hazardous and non-toxic materials should be used in facility and activity operations and procedures, when practicable.

d. Waste should be handled, stored, and disposed of in a manner which protects the health and welfare of all persons.

e. Storage and disposal of POLs should be by the method(s) most advantageous to the government, in compliance with federal, state, local, DoD, and Army requirements.

f. Hazardous waste should be safely controlled, accounted for with an audit trail and chain of custody, and handled in accordance with legal requirements.

g. This project should not establish or maintain a landfill.

h. To the extent possible, environmentally friendly products and products made from recycled materials should be purchased for use at the project.

WASTE DEFINITIONS[2]

3-1 Solid Waste

Solid waste includes garbage, refuse, and sludge as well as any solid, semi-solid, liquid, or contained gaseous material that is discarded. A discarded material is one that has been determined to be an inherently waste-like material by the EPA Administrator. Under certain circumstances, recycled materials are considered discarded materials (and therefore solid wastes) if they are used in a manner constituting disposal, burned for energy recovery, reclaimed, or accumulated speculatively. Certain wastes have been excluded for the definition of solid waste: domestic sewage; point-source discharges regulated under the Clean Water Act; irrigation return flows; source, special nuclear, or by-product material regulated under the Atomic Energy Act; *in situ* mining waste; pulping liquors that are reclaimed; spent sulfuric acid used to produce virgin sulfuric acid; and secondary materials reclaimed and returned to the original generation process for reuse. The regulatory definition of solid waste may be found in 40 CFR 261.2.

3-2 Hazardous Waste

The Resource Conservation and Recovery Act (RCRA) addresses the "cradle to grave" management of hazardous waste. This includes the generation, storage, treatment, transportation and disposal of hazardous wastes. RCRA defines hazardous waste as a solid waste (including liquids and gases), or a combination of solid wastes which may, because of its quantity, concentration, or physical, chemical or infectious characteristics:

- o cause or significantly contribute to an increase in mortality or in serious irreversible, or incapacitating illness; or

- o pose a substantial present or potential hazard to human health or the

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[2] Some of the wording in this section was adapted from a publication prepared by ENSR Consulting and Engineering, Acton, Massachusetts, entitled "A guide to Permitting, Compliance, Closure, and Corrective Action Under the Resource and Conservation Recovery Act", dated October 1990.

environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Certain types of solid waste are excluded from regulation as hazardous waste. These include:

- o household waste;
- o solid wastes generated by growing crops or raising animals, and which are returned to the soil as fertilizers;
- o mining overburden returned to the mine site;
- o ash waste produced from the combustion of fossil fuels;
- o wastes from oil, gas, and geothermal exploration, development, or production;
- o certain wastes failing the toxicity characteristic test including discarded wood or wood products, and petroleum-contaminated media or debris;
- o specific wastes from the extraction, beneficiation, and processing of ores and minerals; and
- o cement kiln dust waste.

See 40 CFR 261.4 for the complete listing of exclusions.

Listed versus Characteristic Hazardous Wastes. Under the current federal regulatory framework, a solid waste is considered a hazardous waste (and therefore subject to requirements of RCRA) if it is either a "listed" waste under 40 CFR Part 261 Subpart D, or a "characteristic" waste under 40 CFR part 261 Subpart C. A waste is a listed waste if it comes from a process that was found to generate a "hazardous" waste, or if the waste is a commercial chemical product that has been discarded. A characteristic waste exhibits any one or more of the following characteristics: ignitability, corrosivity, reactivity, or toxicity. The regulatory definition of hazardous waste appears in 40 CFR 261.3. Characteristic

wastes are no longer considered hazardous wastes if they are treated so that the material no longer exhibits the characteristic that made them hazardous. For example, if a corrosive waste is neutralized so that it is no longer corrosive (i.e., pH < 2.0 or pH > 12.5), then the waste is no longer considered hazardous. However, treatment of a listed waste does not render the subsequent treated waste and/or any residues resulting from treatment nonhazardous, even though the treated waste may be innocuous. A listed waste remains listed until it is delisted.

Special Wastes. Non-hazardous solid waste requiring handling other than normally used (see 40 CFR 240.101 and 310 CMR 19.061). Special wastes are waste streams that do not come under RCRA, but may come under state hazardous waste requirements or under the Toxic Substance Control Act. Examples include waste oil in Massachusetts, and PCBs and asbestos which are considered hazardous under TSCA. Asbestos is considered to be a special waste under Massachusetts regulation.

3-3 Non-Hazardous Waste

For purposes of this plan non-hazardous wastes are wastes that are not considered hazardous waste under federal or state regulation. This would include such items as paper, cardboard, beverage containers, scrap metal (free of any residues), and woody debris.

3-4 Classification of Hazardous Waste Generators

The first step in the waste cycle is the generator. Under RCRA regulations, generators must determine if their waste is hazardous and must oversee the ultimate fate of the waste. RCRA identifies three different categories of hazardous waste generators. These categories are large quantity generator, small quantity generator (SQG), and conditionally exempt small quantity generator (CESQG). Definition of these categories is included in the Glossary.

A summary of key RCRA criteria for CESQGs and SQGs are:

	Hazardous Waste Generation amount/month	Accumulation of Hazardous Waste maximum amount
CESQG	max. 100 kg (220 lbs)(~26 gal.)	1,000 kg (2,200 lbs)(260 gal.)
SQG	max. 1,000 kg (2,200lbs)(~ 260gal.)	6,000 kg (13,200 lbs)(~1,560 gal.)

Based on discussions with the New England Division Environmental Coordinator, it was determined that the project is designated as a RCRA small quantity generator (SQG) with U.S. EPA Region I. This designation was based on a worst case assumption as to the amount of wastes generated in any calendar month. However, typically the project generates much less waste than this in most calendar months. Each project has been assigned an EPA federal facility identification number for reporting purposes. (See Appendix B.)

These numbers were issued by EPA to the Corps prior to the Federal Facilities Compliance Act, which was promulgated in 1992. Since the Federal Facilities Compliance Act the federal projects are also required to meet the Massachusetts procedural and substantive requirements relating to RCRA hazardous waste laws and regulations.

RCRA, like most federal environmental legislation, encourages states to develop and run their own hazardous waste program. The state program must be as least as stringent as the EPA program. Massachusetts has been authorized by EPA to run their own hazardous waste program. State of Massachusetts Hazardous Waste Regulations define the terms VSQG (very small quantity generator)[3] and SQG (small quantity generator). The key criteria are similar except the SQG may accumulate 6,000 kg in underground tanks and only 2,000 kg in above ground containers of hazardous waste and the VSQG may accumulate only 600 kg.

[3] The Massachusetts Very Small Quantity Generator designation is similar to the Federal/RCRA CESQG designation.

The project manager should ensure that he is in compliance with both state and federal requirements for hazardous waste generators. In general, SQGs are required to meet all requirements applicable to hazardous waste generators unless specifically excluded, this includes properly storing and labeling hazardous waste and using the manifest system to ensure that waste is sent to an EPA and State approved disposal facility. (A comparison of RCRA generator requirements are include in the ERGO manual EC-95/05, page 4-3.)

The following are key RCRA accumulation periods for CESQGs and SQGs:

	Accumulation Time Limits
CESQG	none
SQG	180 days (270 days if transport distance greater than 200 mi.)

A summary of Massachusetts requirements for Small Quantity Generators of Hazardous is included as Appendix C.

Massachusetts also regulates used oil as a hazardous waste. The Table on page 5 in Appendix C can be used to determine the project waste oil regulatory status.

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MANAGEMENT OF WASTE STREAMS

4-1 Hierarchy of Solid Waste Management Options

The following is the hierarchy of solid waste management options suggested for disposal of solid wastes.[4]

a. Purchase and use recycled products.

b. Reduce the amount of waste generated.

c. Sort, recycle, and compost appropriate components of the waste stream.

d. Combust, with energy recovery, the balance of waste that cannot be reduced or recycled.[5]

e. Landfill wastes that cannot be reasonably be recycled or combusted.[5]

The solid waste management system available in Massachusetts includes recycling and composting facilities, waste processors, solid waste combustion facilities, and landfills. The variety of disposal options should be fully considered in the management of project wastes.

4-2 Solid Waste Generators at Buffumville Lake

There are several different potential waste generation locations. The following is a list of these sites. General management of these materials is discussed in Chapters 4 and 5. (See Appendix D for project specific solid waste management infrastructure information such as location of trash/recycling receptacles and dumpsters.)

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[4] Taken in part from the Draft Massachusetts Solid Waste Master Plan, 1995 Update (page 15)

[5] This management option is not available on-site at the project.

Project Office. Generates high grade office paper, other recyclable paper (eg. newspaper), containers (plastic, glass, metal), fluorescent lights and light ballasts (check for PCBs), household batteries, cardboard, possible halon (check fire extinguisher), and miscellaneous refuse.

Utility Building. The specialized storage room stores the paint, oil, automobile batteries, and hazardous materials.

Garage. Stores the styrofoam and cardboard received as packaging.

Storage Building. Stores the fertilizer, signs, small hand equipment etc...

Control Building/Dam. Uses antifreeze, fuel oil, and lubricants used for the operation and maintenance of the emergency generator, the heating unit, and the flood control gates. Equipment servicing is conducted by a contractor and residues are carried off-site by the contractor.

Log Boom. Generates woody and other debris from flooding (tires, 50-gal. drums).

Picnic Areas/Swimming Beaches. Generates miscellaneous refuse, non-recyclable hand towels in rest rooms, beverage containers (note in order to minimize waste generation at the recreation areas, a carry in carry out policy has been adopted.) Solid waste is generated by the public that uses the recreation areas.

Boat Ramps. Generates miscellaneous refuse, recyclable beverage containers. Solid waste is generated by the public that uses the recreation areas.

Rain Gage. Biodegradable antifreeze is used in the rain gage.

Project lands. Generates trash illegally dumped at project by the public - old tires, yard waste, car bodies, roofing shingles, medical waste, etc. (Gates are maintained at access roads to prevent illegal dumping of trash on project lands.)

Renovation/Construction at Project. Generates asphalt and building construction debris.

MANAGEMENT OF HAZARDOUS WASTE

5-1 General Requirements

A separate collection, packaging and storage system should be established, so that all wastes are properly segregated, identified and labeled to facilitate disposal through a commercial contractor.

The use of materials which generate hazardous waste should be minimized. Hazardous materials should be purchased in minimal quantities for completion of the task at hand.

The hazardous waste should be stored in a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored in the container. Where the hazardous waste generating activity is carried out by a Corps contractor the contractor will be required to follow all applicable state, local and federal regulations.

Throughout the period of storage or treatment, each container shall be clearly marked and labelled in a manner which clearly identifies, in words, the hazardous waste(s) being stored or treated in the container and the hazard(s) associated with the hazardous waste (e.g., ignitable, toxic, dangerous when wet). Each container shall also be marked clearly with the words "Hazardous Waste". The period of storage should not exceed that allowed by MA DEP.

The generating activity is responsible for preparation of containers and documentation for disposal and should comply with Department of Transportation Regulations for transport of hazardous materials.) Containers must be accompanied by proper documentation and any other information required by the contractor, such as Material Safety Data Sheets (MSDS), laboratory analysis results, or waste profile data.

Hazardous waste should be disposed of through a licensed hauler and sent to a licensed facility. A hazardous waste manifest will accompany any materials and appropriate record keeping will be utilized. Only those formally designated and authorized by the

Division Commander are authorized to execute hazardous waste manifests and related documents. The formal designation and authorization must be in writing and state the employee is within their scope of employment when executing such documents. Records of the authorization should be kept on file. It is suggested that all records regarding Hazardous Wastes be maintained at the project office for a minimum of 3 years. (See Hazardous Waste Manifest/Record Keeping, Appendix E and Massachusetts Hazardous Waste Regulations.)

Inspections should be made of hazardous waste storage areas to monitor any spills and leaks. If spills are detected, the project Spill Prevention Control and Countermeasures Plan (SPCCP), and Spill Contingency Plan will be implemented. (See Appendix F)

Specific Petroleum, Oil, and Lubricant requirements are included in the Spill Prevention, Control and Countermeasures Plan (SPCCP), and Spill Contingency Plan.

If medical wastes are found on the project lands the local Board of Health should be notified. The Board of Health may wish to notify the Massachusetts Department of Public Health. The area where the waste is located should be secured and posted as to the hazard. A state approved contractor should be retained to remove the waste from the site. The contractor should be someone experienced in dealing with medical wastes such as an ambulance service or a hospital. In Massachusetts there are medical manifest requirements under the Massachusetts Department of Public Health Regulations. The medical waste may also be a RCRA listed or characteristic hazardous waste. The Division Safety Officer should be notified regarding any medical wastes found on project lands.

5-2 Specific Suggestions for Disposal of Hazardous Waste.

Used Oil. Used oil is not a listed RCRA waste, however, it is a listed Massachusetts hazardous waste. All flood control project automobiles are serviced off-site including oils changes. However, if there is any used oil generated at the project this should be handled as a Hazardous Waste in manner consistent with state regulations. According to the Mass DEP waste oil must be manifested.

Used Oil Filters. Under the hazardous waste regulations, if a generator intends to dispose of used oil filters, the generator is required to determine whether the filter is hazardous waste and either to recycle or dispose of it properly in accordance with

Hazardous Waste regulations. The Massachusetts DEP strongly recommends recycling used oil filters. All automobiles are serviced off-site by a service contractor. The service contractor is responsible for appropriate recycling of the used oil filters. See Appendix G for information sheet.

Cleaning Solvent. All degreasing of equipment at the project is done by a contractor.

Lead Acid Batteries. In Massachusetts there is ban on landfilling or incineration of lead batteries. (CMR 19.017) Batteries should be stored in a well ventilated and secured storage area with secondary containment to prevent spills to the environment. Filler caps should remain secure to prevent accidental spillage. Batteries are recyclable and can be returned to their place of purchase.

Household Batteries. Household batteries from calculators, flashlights, cameras, etc. may contain mercury, cadmium, and lead. These should not be disposed of as miscellaneous refuse. Batteries are not classified as hazardous waste if they are recycled. Batteries should be collected at the project and disposed of at an approved recycling facility. Contact the local community or MA DEP to find out about any collection program.

Antifreeze. A biodegradable antifreeze is used in the precipitation gage at the project. Antifreeze can be a hazardous waste and should be tested. All automobile maintenance is done off site by a service garage.

Surplus Paint and Allied Products. They may include oil based paint, paint thinners, turpentine, varnishes, shellacs, or polyurethane. Purchase of these products should be on an as needed basis. Any residues should be disposed of in accordance with state and federal regulations.

Pesticides/Herbicides. Careful selection, inventory and control of materials will help to reduce or eliminate their disposal. Any residues should be disposed of in accordance with state and federal regulations.

At the project most of the herbicide/pesticide activities are carried out by a contractor. All contractors will be required to be state licensed and to comply with applicable state and federal regulations.

Asbestos Containing Materials. Any major rehab involving asbestos should be done by a state licensed contractor and disposed of in accordance with state and federal regulations.

Treated Wood. Wood is chemically treated to enhance its resistance to rot and insect damage. Treatment extends use from 3-5 years to 20-50 years or longer. The four most common mediums to treat wood are creosote, inorganic arsenical, pentachlorophenol (PC), and Copper Napthenate. Treated wood is not a listed hazardous waste under Federal Regulations. However, it is subject to the Toxicity Characteristics Leaching Procedure (TLCP) to determine if the wood is a characteristic hazardous waste (40 CFR 261.24).

Potential disposal methods for treated wood products are reuse, energy recovery, and landfill disposal. Creosote posts which are surplused from their original intended use should be legally disposed of and not reused.

Fluorescent Fixtures and Light Bulbs. Fluorescent lighting ballasts have historically contained capacitors impregnated with polychlorinated biphenyls (PCBs). (The federal government banned the production of PCBs in 1979.) The Massachusetts Department of Environmental Protection policy for disposal of lighting ballasts from fluorescent lights containing PCB impergnated capacitors is contained in Appendix G. Basically the policy outlines the handling of this material as hazardous waste. Fluorescent light bulbs may contain mercury. These should not be included in the miscellaneous refuse as they may qualify as a hazardous waste. See information sheet in Appendix G.

Ozone Depleting Substances (Chlorofluorocarbons/halon). Chlorofluorocarbons may be contained in air conditioners, dehumidifiers, refrigerators, and automobile air conditioners. Individuals servicing and disposing of air conditioning and refrigeration equipment are prohibited from knowingly venting refrigerant into the atmosphere. At the flood control project these units are serviced off-site. The service contractor is required provide documentation that they are certified to deal with this material. Any new equipment purchased should maximize the use of safe alternatives to ozone depleting substances.

Toner Cartridges. If the toner cartridge was purchased from the Division warehouse, then the cartridge may be returned to the warehouse for recycling.

MANAGEMENT OF NON-HAZARDOUS WASTE

6-1 General Requirements

Recreational Waste Collection. Covered waste containers are provided at some public use areas. At Buffumville Park a Carry In/Carry Out program is currently maintained.

All containers should have functioning lids. Separate containers should be provided for miscellaneous refuse and recyclable beverage containers. Recycling containers should be labeled as such.

The Carry In/Carry Out program at Buffumville Park may include a sign informing the public of the policy and may include the provision to the public of a refuse bag.

6-2 Recyclable Waste

Beverage Containers (glass and plastic bottles, aluminum cans). There is a ban on landfill disposal or incineration of aluminum cans, metal or glass containers, single polymer plastics in Massachusetts. (Table 310 CMR 19.017(3)) These items should be collected separately from miscellaneous refuse. Deposit containers can either be donated to a local cause for recycling or the waste disposal contract for the project may be modified to include an item for recycling of beverage containers. Non-deposit containers should also be recycled.

High Grade Office Paper/Newspapers/Cardboard/Mixed Paper. There is a ban in Massachusetts on landfill disposal or incineration of recyclable paper. (Table 310 CMR 19.017(3)) High grade office paper is recyclable and should be collected in separate containers for recycling. Cardboard may also be recycled. (See Appendix G.)

Scrap Metal. Scrap metal should be disposed of at a recycling center. See Appendix G for suggested disposal locations.

Styrofoam used in packaging. This item should be disposed of at a local recycling center.

6-3 Compostable Waste

Leaves/woody debris (yard waste)/woody log boom debris. Massachusetts prohibits the landfill disposal or incineration of yard waste or leaves. (Table 310 CMR 19.017(3)) This waste should be composted on or off-site.

6-4 Non-recyclable Wastes

Miscellaneous Refuse and Non-Recyclable Paper. This waste should be picked up by a licensed contractor and disposed of properly by the contractor.

6-5 Difficult to Manage Wastes

Construction and Demolition. Construction and demolition waste (C&D) is debris generated from construction, renovation, repair, and demolition of roads, bridges, and buildings. It includes wood, steel, concrete, masonry, plaster, metal, and asphalt. These wastes have a number of beneficial uses, e.g. crushing asphalt and concrete/brick separately or in conjunction with virgin materials to produce recycled asphalt paving; process gravel, road base, and solid fill. Chipping and grinding wood treated with preservatives produces boiler fuel, a bulking agent for sludge composting; wood fiber, and erosion control for landfills. Untreated wood can be chipped for landscape mulch. At the project, the disposal of this material will be the responsibility of the construction contractor for any renovation project. The material should be disposed of at an approved C&D disposal facility.

Tires. In Massachusetts tires must be shredded prior to disposal in a landfill. (Table 310 CMR 19.017(3)) Used tires from project automobiles should be brought to a local transfer/recycle facility. See Appendix G for suggestions.

White Metal Goods. White metal goods are large appliances which include refrigerator, water heaters, electric ranges etc.. Any old appliances at the project offices which are replaced should be hauled away by the retailer when the new appliance is delivered. The preparation of discarded white goods for bulking may be done by a municipality, an appliance dealer, or a processor. Those illegally dumped on the project should be handled in accordance with state and federal regulations. Refrigerators are likely to contain Chlorofluorocarbons (CFCs). See information sheet in Appendix G.

RESPONSIBILITIES

7-1 The Division Environmental Coordinator

The Environmental Coordinator is responsible for the following items.

- o Provide technical assistance and guidance to project manager in developing environmentally safe procedures for solid waste management.

- o Provide oversight of required permits and renewals, and EPA hazardous waste generators application numbers.

- o Review and approve Solid Waste Management Plan, revisions, and amendments.

7-2 The Project Manager

The Project Manager is responsible for the following items.

- o Program sufficient funds to insure compliance with solid waste management requirements.

- o Maintain a complete and current inventory of stored hazardous materials and hazardous waste at the project.

- o Assure that only those properly trained and designated by the Commander will handle hazardous wastes at the project and sign hazardous waste manifests.

- o Monitor facility compliance with hazardous waste manifest procedures and make recommendations for corrective actions or procedural changes when necessary or advisable.

- o Maintain copies of all relevant regulations, directives, and guidance on hazardous materials and wastes and POLs at the project and keep these

materials in an organized highly visible manner.

- Arrange for any testing of materials suspected of being hazardous wastes.

- Inspect storage areas for malfunctions and deterioration, operator errors, and discharges which may be causing, or may lead to the release of waste constituents into the environment or are a threat to human health. Inspections must be conducted to identify potential problems in time to correct them before a problem occurs.

- Assure reuse of recycled materials when possible and feasible. Appropriate disposal and recycling specifications should be included in purchase requests or contracts.

- Maintain material safety data sheets in the project office for staff to review.

- Review this Solid Waste Management Plan and make any necessary revisions to the Plan.

TRAINING

8-1 Hazardous Waste Training

Training is an important component of regulatory compliance. Training should be carried out to ensure that all personnel working in facilities with hazardous materials are knowledgeable of hazardous waste management requirements and spill reporting requirements.

Department of Transportation regulation 49 CFR 172.700 (Subpart H-training) requires the training of employees who load, unload, or handle hazardous materials for transportation, assure the safety of the shipment, or operate a motor vehicle used to transport hazardous materials.

Only employees formally designated, trained and authorized by the Division Commander are authorized to execute hazardous waste manifests and related documents. The formal designation and authorization must be in writing and state the member is within their scope of employment when executing such documents. Each project unit should have at least one person formally designated and trained for this function.

All hazardous waste management training should be coordinated with the Division Environmental Compliance Coordinator and Safety Officer.

8-2 Other Training

Although there is no specific training requirements for non-hazardous solid waste management, the Project Manager is encouraged to provide educational recycling information to employees for their information.

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GLOSSARY
TERMS AND ABBREVIATIONS

CFR - Code of Federal Regulations

Certification - A statement of professional opinion based upon knowledge and belief.

Container - A portable device in which a material or waste is stored, transported, treated, disposed of, or otherwise handled.

Disposal - The discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such waste (or any constituent thereof) may enter the environment or be emitted into the air or discharged into any waters, including ground waters.

DOT - The United States Department of Transportation

DRMO - The Defense Reutilization and Marketing Office

EPA - The United States Environmental Protection Agency

Excluded Wastes - Certain wastes may not be regulated by RCRA and may not be not subject to the disposal procedures set forth in this plan. These types of waste generally include:

a. Domestic waste
b. Industrial waste water discharge
c. Nuclear waste regulated under the Atomic Energy Act
d. Irrigation-return flows
e. Wastes that are reused or recycled, except for the storage and transportation of sludges and listed wastes
f. Agricultural wastes returned to the soil as fertilizers or soil conditioners
g. Mining overburden returned to the mine site
h. Utility wastes (fly ash, flue gas emission sludge, bottom ash)
i. Oil and gas drilling muds and brines

Generator - A person who produces or creates hazardous waste identified or listed under RCRA (relating to criteria, identification, and listing of hazardous waste).

HSWA - Hazardous and Solid Waste Amendments of 1984 (to RCRA)

Hazardous Material - (1) A substance or material which has been determined by the Secretary of the U.S. Department of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been designated. (2) Is listed in 49 CFR, Part 172.101, Hazardous Materials Table.

Hazardous Waste - All excess materials, substances, or items which meet the following conditions are hazardous waste when they are discarded, unless they are excluded waste.
a. Materials, substances, or items included in 40 CFR, Part 261.30 to 261.33.
b. Waste, or any constituent thereof, though not specifically listed as hazardous which exhibits the characteristics of:
(1) Ignitability- Liquid having a flash point of less than 140 Degrees F (60 degrees C). Non-liquid substances which cause fire through friction, absorption of moisture or which is liable to ignite or burn vigorously and persistently.
(2) Corrosivity - Aqueous (water soluble) waste exhibiting a pH of equal to or less than 2.0, or equal to or greater than 12.5.
(3) Reactivity - Substances which can readily undergo violent chemical changes, react violently, form potentially explosive mixtures with water, or explode at normal room temperature and pressure.
(4) EP Toxicity - Solid wastes exhibit the characteristics EP Toxicity when extracts from representative samples of the wastes contain any of the contaminants identified in 40 CFR Part 261.44, at a concentrated equal to or greater than the respective value given in the table.

High Grade Paper - Includes letterhead, dry copy papers, miscellaneous business forms, stationery, typing paper, tablet sheets, computer paper.

Management - The entire process, or any part, of storage, collection, transportation, treatment, and disposal of hazardous wastes by person engaging in such process.

Manifest - The shipping document EPA Form 8700-22, and if necessary, EPA Form 8700-22A, originated, signed, and distributed in accordance with the instructions supplied with the

manifest form and applicable state requirements.

Manifest System - The manifest, instructions supplied with the manifest, and distribution system for copies of the manifest which together identify the origin, routing, and destination of hazardous waste from the point of generation to the point of treatment, storage or disposal.

NGVD - National Geodetic Vertical Datum-MSL of 1929.

RCRA - Resource Conservation and Recovery Act of 1976. (P.L.94-580, as amended)

RCRA Conditionally Exempt Small Quantity Generators [6] (40 CFR 261.5) - According to RCRA, you are a conditionally exempt small generator (CESQG) if you generate no more than 100 kilograms (220 lbs.) of hazardous waste per month.

Other than the hazardous waste determination requirement in 40 CFR 262.11, CESQGs are exempt from RCRA provided they do not exceed the following limits for hazardous waste storage or generation:

	Acutely Hazardous Waste	Hazardous Waste
- Generation	1 kg (2.2 lb)/month	100 kg (220 lb)/month
- Waste Storage	1 kg (2.2 lb)	1,000 kg (2,203 lb)
-Residue from cleanup of spills, leaks, etc.	100 kg (220 lb)	---------

In determining the quantity of hazardous waste generated, a CESQG need not include waste removed from on-site storage; waste produced by on-site treatment so long as that waste was already counted; or spent materials that are generated, reclaimed, and reused on site so long as the material was already counted.

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[6] Source: ENSR Consulting and Engineering, Acton, Massachusetts. October 1990. "A guide to Permitting, Compliance, Closure, and Corrective Action Under the Resource and Conservation Recovery Act."

If your hazardous waste alone exceeds the limits, you are subject to full regulation as either a small or large quantity generator. Additionally, CESQGs who mix hazardous waste with used oil destined to be burned for energy recovery are subject to regulations under Subpart E of 40 CFR Part 266.

A CESQG may either treat or dispose of hazardous waste or acutely hazardous waste using an on-site facility, or ensure delivery to an off-site facility in the U.S. If you choose an off-site facility, it must:

- o be permitted under 40 CFR Part 270;
- o have interim status under 40 CFR Parts 265 and 270;
- o be authorized by a state hazardous waste program;
- o be permitted by a state to manage municipal or industrial solid waste; or
- o beneficially use or reuse, or legitimately recycle or reclaim its waste, or treat its waste prior to doing so.

A RCRA small quantity generator - produce between 100 kilograms per calendar month (about 220 pounds) and 1,000 kilograms (about 2,200 lbs) are considered small quantity generators (SQG). SQGs are required to properly label their hazardous waste and use the manifest system to ensure that waste is sent to an EPA or State approved disposal facility.

Massachusetts - Very Small Quantity Generators (CMR 30.353) - (1) A generator is a very small quantity generator if that generator:

(a) Does not generate in a calendar month 100 kilograms (about 220 lbs) or more of regulated recyclable material or non-acutely hazardous waste identified or otherwise described in 310 CMR 30.120 through 30.125 and 30.130 through 30.135, provided that, for purposes of 310 CMR 30.353(1), waste oil and off-specification used oil fuel shall be subject to 310 CMR 30.253(6); and

(b) Has not accumulated at any one time 600 kilograms (about 1,320 lbs) or more

of regulated recyclable material or non-acutely hazardous waste identified or otherwise described in 310 CMR 30.120 through 30.125 and 30.130 through 30.135, provided that, for purposes of 310 CMR 30.353(1), waste oil and off-specification used oil fuel shall be subject to 310 CMR 30.253(6); and

(c) Does not generate in a calendar month any regulated recyclable material or acutely hazardous waste listed or otherwise described in 310 CMR 30.136; and

(d) Has not accumulated at any one time any regulated recyclable material or acutely hazardous waste listed or otherwise described in 310 CMR 30.136; and

(e) Does not generate in a calendar month any residue, contaminated soil, water, or other debris resulting from the clean-up of a spill, into or on any land or water, of any regulated recyclable material or acutely hazardous waste listed or otherwise described in 310 CMR 30.136; and

(f) Does not generate in a calendar month any inner liners from containers described in, or of paper bags containing residues of regulated recyclable material or waste listed or otherwise described in, 310 CMR 30.136.

(2) For the purpose of determining the monthly quantity in 310 CMR 30.353(1), a generator:

(a) shall include hazardous waste received from off the site of generation, and

(b) need not include the following:

1. Hazardous waste which is removed from on-site storage, provided that such waste has already been counted upon generation; and

2. Waste produced by on-site treatment of his hazardous waste, provided that such waste has already been counted upon generation; and

3. Samples collected for the purpose of conducting treatability studies pursuant to 310 CMR 30.099(23).

(3) In order to have the status of a very small quantity generator, the generator shall comply with the requirements set forth or referred to in 310 CMR 30.353, and need not comply with any other requirements of 310 CMR 30.000. A person who is not in compliance with the requirements set forth or referred to in 310 CMR 30.353 shall have the status of a small quantity generator, a large quantity generator, or the owner or operator of a facility, as the case may be, and shall comply with all requirements in 310 CMR 30.000 applicable to the status he has at the time.

(4) A very small quantity generator shall handle all hazardous waste he generates or accumulates in a manner which neither could nor does endanger public health, safety, or welfare, or the environment, and in compliance with all applicable local, State, and Federal laws and regulations.

(5) A very small quantity generator shall register with the Department by notifying the Department in writing of its activity involving hazardous waste or regulated recyclable material. If the Department prescribes a form for such registration, the generator shall use such form when submitting such registration. Such a registration shall be signed and submitted in compliance with 310 CMR 30.006 and 30.009. The generator shall follow such procedures as may be required, requested or authorized by the Department to obtain and keep his status as a very small quantity generator. If the very small quantity generator intends to transfer custody or possession of the hazardous waste or regulated recyclable material to another person or persons, the registration shall set forth the name, address, and EPA identification number, if applicable, of each such person. If the very small quantity generator intends to itself treat or recycle the hazardous waste or regulated recyclable material, the registration shall set forth the process by which the hazardous waste or regulated recyclable material shall be treated or recycled. If the site has an EPA identification number, or has been assigned an identification number by DEP, that number shall be included in the registration. An identification number for the site is required if the very small quantity generator is using a manifest.

Recycling - The process by which recovered materials are transformed into new/usable products.

Resource Recovery - The process of obtaining materials or energy from solid waste.

Source Separation - The separation of recyclable materials at their point of generation by the generator.

Storage - The holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere.

TSCA - Toxic Substance Control Act.

Used Oil - Any oil that has been refined form crude oil or synthetic oil, used, and as a result of such use, is contaminated by physical or chemical impurities.

Used Oil Fuel - Any used oil burned (or destined to be burned) for energy recovery including any fuel produced from used oil by processing, blending or other treatment, and that does not contain hazardous waste (other than that generated by a small quantity generator and exempt from regulation as hazardous waste under provisions of 40 CFR 261.5). Used oil fuel may itself exhibit a characteristic of hazardous waste and remain subject to regulation as used oil fuel provided it is not mixed with hazardous waste.

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REFERENCES

Commonwealth of Massachusetts. Executive Office of Environmental Affairs. June 1995. Draft Massachusetts Solid Waste Master Plan Update.

Commonwealth of Massachusetts. May 1995. Recycling Services Directory and Market Guides for Massachusetts.

ENSR Consulting and Engineering, Acton, Massachusetts. October 1990. "A Guide to Permitting, Compliance, Closure, and Corrective Action Under the Resource and Conservation Recovery Act."

U.S. Army Corps of Engineers, New England Division. March 1994. Environmental Compliance Assessment of Buffumville Lake and Hodges Village Dam, Oxford, Massachusetts. 02254-9149.

U.S. Army Corps of Engineers, Baltimore District. July 1993. POL Waste Liquid and Hazardous Waste Management Plan for Baltimore District, Project Operations Branch.

U. S. Army, Fort Devens Massachusetts. February 1993. Hazardous Waste Management Plan, prepared with assistance from Halliburton NUS Corporation, Pittsburgh Pennsylvania.

APPENDIX A

HAZARDOUS WASTE INVENTORY

(Hazardous Waste Inventory should be completed by Project Manager and inserted here.)

APPENDIX B

U.S. EPA IDENTIFICATION NUMBERS FOR THE FLOOD CONTROL PROJECTS

(list furnished by U.S. EPA)

FEB 1991

DISTRICT	INS #	INSTALLATION NAME	ST
NEW ENGLAND DISTRICT	00047	ANSONIA-DERBY LOC PROT	CT
	00048	CH BET NO&SO BROS ILS	VT
	00049	CHATHAM STAGE HARBOR	MA
	00050	DERBY LOCAL PROTECTION	CT
	00051	DICKEY/LINCOLN SCH LAKE	ME
	00053	PAWTUXET COVE	RI
	00054	PLYMOUTH-LONG BEACH DIK	MA
	09607	MANSFIELD HOLLOW LAKE	CT
	09813	BIRCH HILL DAM	MA
	09814	CAPE COD CANAL	MA
	09815	KNIGHTVILLE DAM	MA
	09817	TULLY LAKE	MA
	09897	BLACKWATER RESERVOIR	NH
	09898	EDWARD MACDOWELL LAKE	NH
	09899	FRANKLIN FALLS RESERV	NH
	09900	SURRY MOUNTAIN LAKE	NH
	10143	UNION VILLAGE RESERVOIR	VT
	11421	KENNEBUNK RIV JETTY	ME
	12528	BALL MOUNTAIN RESERVOIR	VT
	12533	HOPKINTON-EVERETT DAMS	NH
	12535	NORTH SPRINGFIELD LAKE	VT
	12541	THOMASTON DAM	CT
	12542	TOWNSHEND LAKE	VT
	12565	HODGES VILLAGE DAM	MA
	12566	EAST BRIMFIELD LAKE	MA
	12567	SUFFIELD RESERVOIR	MA
	12568	BARRE FALLS RESERVOIR	MA
	12572	OTTER BROOK RESERVOIR	NH
	13580	NORTH HARTLAND LAKE	VT
	13626	WEST HILL DAM	MA
	13663	WESTVILLE LAKE	MA
	14726	LITTLEVILLE LAKE	MA
	14746	RELAY STATION BUILDING	MA
	15492	HANCOCK BROOK LAKE	CT
	15503	NORTHFIELD BROOK LAKE	CT
	15512	WEST THOMPSON LAKE	CT
	16060	CHICOPEE FALLS LOCAL PR	MA
	16061	CONANT BROOK DAM	MA
	16074	RELAY STATION BUILDING	CT
	16080	PT JUDITH BREAKWATER SI	RI
	19336	COLEBROOK RIVER LAKE	CT
	19337	HOP BROOK LAKE	CT
	19338	RELAY STATION BUILDING	VT
	19808	BLACK ROCK LAKE	CT
	19817	COLEBROOK RIVER LAKE	MA
	32394	CHARLES RIVER NVS	MA

APPENDIX C

MASSACHUSETTS HAZARDOUS WASTE GENERATOR INFORMATION

A Summary of Requirements for Small Quantity Generators of Hazardous Waste

Updated December 15, 1994

Prepared by:

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INTRODUCTION

Many essential services, including auto repair and dry-cleaners and institutions, such as schools and hospitals, produce hazardous waste. If you use cleaning solvents, oil, inks, paints, acids, or alkalines, for example, you may be a generator of hazardous waste.

As a generator, it is your responsibility to know your legal obligations under the Massachusetts Hazardous Waste Regulations. Inappropriate handling and disposal of hazardous waste has damaged water supplies and threatened human health. Increasingly, businesses find that meeting the legal requirements is good practice that protects the environment, the equity in their property and their neighbors and employees.

Under the "Superfund" law, you are liable for your hazardous waste and any damage it causes even after it leaves your site and is taken away by a transporter to a treatment, storage or disposal facility. You can be required to contribute to the costs of cleaning up any contamination, resulting from your wastes wherever they end up. It is important, therefore, that you determine how to prevent pollution before it begins.

The cost of waste disposal and liability coverage is escalating. Landfilling of many hazardous wastes is now banned. There are few commercial hazardous waste disposal facilities and their capacity is limited.

Reducing the amount of your hazardous waste may be the most economical and environmentally sound approach to meeting your requirements. Substituting non-hazardous for hazardous products, modifying your process, segregating non-hazardous from hazardous waste streams, recycling your waste and better housekeeping should be key considerations for you.

The Massachusetts Department of Environmental Protection (DEP) regulates all non-households (businesses and institutions) which generate any amount of hazardous waste. Radioactive wastes, unless mixed with hazardous waste, and infectious wastes are regulated by the Massachusetts Department of Public Health as well as by federal agencies.

This brochure is a summary of a portion of the Massachusetts Hazardous Waste Regulations and is organized as follows:

Classification
Paperwork
Housekeeping
Very Small Quantity Generators

It is designed to help you understand the regulations and will assist you in meeting your legal obligation and avoiding potential penalties. However, it is not a substitute for reading and complying with the full Hazardous Waste Regulations 310 CMR 30.000.

Because Massachusetts requirements are more stringent than the federal requirements, you will be in compliance with federal hazardous waste regulations when you meet the state standards.

The complete regulations are available at cost at the State House Bookstores. You can have them sent to you by calling Boston's bookstore (617) 727-2834, or (413) 784-1376 in Springfield. Ask for the most recent compilation of 310 CMR 30.000.

For a specific fact sheet for your industry, which will provide more detailed information, call the Hazardous Waste Regulatory Program's Compliance Assistance Line at (617) 292-5898.

Two other products from the Department of Environmental Protection which may help you understand the regulations are:

"Little Things Mean a Lot": a 14-minute video with a short friendly message outlining the basic steps in appropriate hazardous waste management

Available to borrow from DEP without charge by calling (617) 292-5898 or to purchase [$30.00] from Environmental Media, Inc., 537 Congress Street, Suite 304, Portland, ME 04104 (207) 774-1230.

Small Quantity Generator Workbook: A Self-Help Guide for Small Quantity Generators of Hazardous Waste

Available for purchase ($4.35 + handling) at the State House Bookstores

CLASSIFICATION

Determine whether your waste is hazardous (310 CMR 30.100)

Common hazardous wastes are:

- waste oil
- solvents and thinners
- acids and bases/alkalines
- toxic or flammable paint wastes
- nitrates, perchlorates and peroxides
- abandoned or used pesticides
- some wastewater treatment sludges

There are two ways a waste may be identified as hazardous: it may be **listed** in the regulations (310 CMR 30.131-136) or it may be defined by its hazardous **characteristic** (310 CMR 30.120).

Hazardous waste may be a listed discarded chemical, an off-specification product, or a liquid or solid residue from an operation process, which has one or more of the characteristics below:

* **Ignitable** (easily catches fire, flash point $<140^{\circ}F$);
* **Corrosive** (easily corrodes materials or human tissue, very acidic or alkaline, pH of ≤ 2 or ≥ 12.5);
* **Reactive** (explosive, produces toxic gases when mixed with water or acid);
* **Toxic** (can leach toxic chemicals as determined by a special laboratory test);

Your waste is considered **acutely hazardous** if it is on the list of acutely hazardous wastes (310 CMR 30.136). These wastes are extremely toxic or reactive and are regulated more strictly than other hazardous wastes.

To find out if your waste is hazardous check with:

* the supplier of the product (request a material safety data sheet);
* laboratories;
* trade associations;
* consulting engineers;

and verify by reviewing the Massachusetts Hazardous Waste Regulations.

Determine your generator status and regulatory requirements

Two activities determine your generator category: the rate at which you generate and how much you store (accumulate). The amount and length of time you can accumulate your wastes will vary according to the type of waste.

A **Large Quantity Generator (LQG)** generates more than 1,000 kilograms (2200 lbs.) of hazardous waste in a month, or more than 1 kilogram of acutely hazardous waste (acutely hazardous waste is listed in the Massachusetts regulations, 310 CMR 30.136). The waste must be shipped within 90 days. There is no limit to the amount which can be accumulated.

A **Small Quantity Generator (SQG)** generates less than 1,000 kilograms in a month, and/or less than 1 kilogram of acutely hazardous waste. The waste must be shipped within 180 days and is limited to 6000 kilograms in underground tanks and 2000 kilograms in above ground containers.

A **Very Small Quantity Generator (VSQG)** generates less than 100 kilograms in a month and generates no acutely hazardous waste.

To understand how you are regulated, estimate your maximum monthly volume of waste oil and your maximum monthly volume of all other hazardous waste. The Guide to Determining Status and Regulatory Requirements on page 5 will assist you.

Example:

Your firm generates 55 gallons of spent solvent and 500 gallons of waste oil in a month. According to the Guide (see conversions), you are a Small Quantity Generator (SQG) of hazardous waste because you produce more than 100 kilograms but less than 1000 kilograms, and a Large Quantity Generator (LQG) of waste oil because you produce more than 1000 kilograms. Your regulatory status will be found in Line 5.

Reading across, you may accumulate your solvent for as long as 180 days, or until you have reached a volume of 2000 kilograms (500 gallons) in containers (see page 10), whichever happens first. You must ship your waste oil every 90 days, regardless of the volume. You must obtain an EPA Identification Number and use a manifest for both wastes. You must manage your waste according to the accumulation area standards on page 8 and you must fulfill the emergency preparation and response requirements on page 11. You are not required to file an annual report or a contingency plan or provide full personnel training, which is necessary for large generators of hazardous waste.

GUIDE TO DETERMINING STATUS AND REGULATORY REQUIREMENTS

This matrix does not reflect ACUTELY Hazardous waste

	Regulatory Status		Hazardous Waste Management Accumulation Limits			Waste Oil Management Accumulation Limits			Transport Requirements		Management Requirements		
	Hazardous Waste	Waste Oil	Time (Days)	Volume in Tanks (kg)	Volume in Containers (kg)	Time (Days)	Volume in Tanks (kg)	Volume in Containers (kg)	Must Use Manifest	May Self Transport Haz Waste and/or Waste Oil	Accumulation Area Standards	Emergency Preparation	Personnel Training & Contingency Plans & Biennial Rpt
NOTIFICATION TO EPA	LQG	LQG	90	NO LIMIT	NO LIMIT	90	NO LIMIT	NO LIMIT	YES		YES		YES
	LQG	SQG	90	NO LIMIT	NO LIMIT	180	6000**	2000	YES		YES		YES
	LQG	VSQG	90	NO LIMIT	NO LIMIT	NO LIMIT	600	600	YES*	YES(WO)	YES		YES
	LQG	NONE	90	NO LIMIT	NO LIMIT	N/A	N/A	N/A	YES		YES		YES
	SQG	LQG	180	6000**	2000	90	NO LIMIT	NO LIMIT	YES		YES	YES	
	SQG	SQG	180	6000**	2000	180	6000**	2000	YES		YES	YES	
	SQG	VSQG	180	6000**	2000	NO LIMIT	600	600	YES*	YES(WO)	YES	YES	
	SQG	NONE	180	6000**	2000	N/A	N/A	N/A	YES		YES	YES	
	VSQG	LQG	NO LIMIT	600	600	90	NO LIMIT	NO LIMIT	YES*	YES(HW)	YES	YES	
	NONE	LQG	N/A	N/A	N/A	90	NO LIMIT	NO LIMIT	YES		YES	YES	
TO DEP	VSQG	SQG	NO LIMIT	600	600	180	6000**	2000	YES*	YES(HW)	YES	YES	
	VSQG	VSQG	NO LIMIT	600	600	NO LIMIT	600	600	YES*	YES			
	VSQG	NONE	NO LIMIT	600	600	N/A	N/A	N/A	YES*	YES			
	NONE	SQG	N/A	N/A	N/A	180	6000**	2000	YES		YES	YES	
	NONE	VSQG	N/A	N/A	N/A	NO LIMIT	600	600	YES*	YES			

* - A manifest must be used for the VSQG category unless self transported.

** - When accumulating in both tanks and containers, the total accumulation cannot exceed 6,000 kilograms and the container accumulation cannot exceed 2,000 kilograms.

Definitions:

Regulatory Status	Kilograms/Month (Generation)
LQG	1000 OR MORE
SQG	100 - 999
VSQG	LESS THAN 100

Conversions:

Kilograms	Pounds	Gallons (varies by substance)
100	220	25 - 27
600	1320	150 - 165
1000	2200	250 - 265
2000	4400	500 - 550
6000	13,230	1500 - 1650

PAPERWORK

The Manifest (310 CMR 30.310)

As a generator you always retain responsibility for your hazardous waste. If your waste is dumped or disposed of improperly, you can be held responsible. It is therefore important that you know where your waste is going and that it is handled properly and safely.

Federal law (the Resource Conservation and Recovery Act of 1976, known as RCRA) requires a national 'cradle to grave' tracking system for hazardous waste. In Massachusetts, every shipment of hazardous waste by a large or small generator must be transported by a licensed hauler and sent to a licensed treatment, storage or disposal facility (TSDF) or a permitted recycling facility and must be accompanied by a shipping document, called the Uniform Hazardous Waste Manifest.

You must use the Massachusetts Manifest form unless you are sending your waste to a facility out of state, in which case you should contact the other state to find out which form to use. You are responsible for completing the generator portion of the manifest. Directions for the distribution of the copies are on the back of the manifest. A copy will be returned to you when the facility has accepted your shipment.

If you do not receive a copy of the manifest from the receiving facility within 35 days of the date when your waste was shipped, you should contact your transporter or the operator of the facility to determine the status of your waste. If you have still not received the manifest within 45 days, you must file an Exception Report, explaining the efforts you've taken, with the DEP's Division of Hazardous Waste and with the state where the designated facility is located.

Note the generator's certification statement on your manifest, which you must sign:

> "If I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford."

All generators must keep copies of all manifests and any records of tests and analyses done of their hazardous waste for at least 3 years, and for the duration of any enforcement action.

Special Conditions for Use of Two-Part or Four-Part Manifest (310 CMR 30.311[7], 30.315 and 30.316)

A two-part manifest shall be used for wastes which are transported to a recycling facility, and returned to the generator as regenerated material by the same company. Copy 1 is retained by the recycling facility, copy 2 by the generator.

A four-part manifest may be used for shipments within Massachusetts of waste oil from any size generator and for waste oil or hazardous waste from VSQG's.

The EPA Identification Number (EPA ID) (310 CMR 30.303)

As a Small Quantity Generator of Hazardous Waste, to have your waste accepted by a licensed hauler or treatment/storage facility, you will be assigned a 9-digit number, with the prefix 'MAD', for your location. This number will be entered on each manifest in Block 1.

In order to get an EPA ID, call DEP (617-338-2255 or 1-800-462-0444, outside the 617 area code) for an application for an EPA Identification Number. Mail the completed application to the office listed in the instructions. Your number will be mailed to you within a few months. While you are waiting for a permanent EPA ID, you can use a temporary ID beginning with the letters MP, followed by your 10-digit telephone number.

The ID number is site-specific. You are required to notify DEP's Division of Hazardous Waste of any change in your address, name of company, contact person or generator status.

Shipping Your Hazardous Waste (310 CMR 30.304, 30.305)

All hazardous waste must be transported in containers that are labeled with the words HAZARDOUS WASTE, the name of the waste, type of hazard (e.g., toxic, flammable), generator's name, address and EPA ID number. Refer to the container standards described on page 8 of this summary.

A list of licensed transporters and Massachusetts treatment, storage or disposal facilities is available from DEP by calling (617) 292-5822. Many transporters are authorized to assist you in preparing your waste for shipment.

Annual Compliance Assurance Fee (310 CMR 4.03)

All Small Quantity Generators of hazardous waste* are billed an annual compliance fee of $300 to cover costs of the services provided by the Department. These services include, but are not limited to, notification processing, compliance inspection, compliance assistance hot line, and information services.

* Small Quantity Generators of waste oil only are not subject to the fee.

HOUSEKEEPING

Accumulation Area Standards (310 CMR 30.351[8])

Your accumulation or storage area must meet the following conditions for both containers and tanks. (NOTE: VSQG's are also required to meet certain of these standards.)

VSQG
* Above-ground tanks and containers must be on a surface which does not have any cracks or gaps and is impervious to the hazardous wastes being stored and on pallets if containers are stacked;

* Area must be secured against unauthorized entry;

* Area must be clearly marked (e.g., by a visible line or tape, or by a fence) and be separate from any points of generation;

* Area must be posted with a sign: "HAZARDOUS WASTE" in capital letters at least one inch high;

* An **outdoor** area must have secondary containment, such as a berm or dike, which will hold any spill or leaks at:
  - 10% of the total volume of the containers, or
  - 110% of the volume of hte largest container, whichever is larger.

  Any spillage must be promptly removed.

  (In general, if the hazardous waste being stored has no free liquids, no pad or berm is required, provided that the accumulation area is sloped, or the containers are elevated.)

Standards for Containers and Tanks (310 CMR 30.680, 30.690)

VSQG * Each container and tank must be clearly and visibly labeled throughout the period of accumulation with the following:

  - the words "HAZARDOUS WASTE:
  - the name of the waste (e.g., waste oil, acetone)
  - the type of hazard(s) (e.g., ignitable, toxic)

SQG ONLY - date on which accumulation began.

VSQG * Each container must be in good condition

VSQG * Wastes of different types must be segregated. This includes not mixing waste oil or used fuel oil with other wastes. Be careful not to put incompatible wastes in the same container or put wastes in unwashed containers that previously held incompatible wastes.

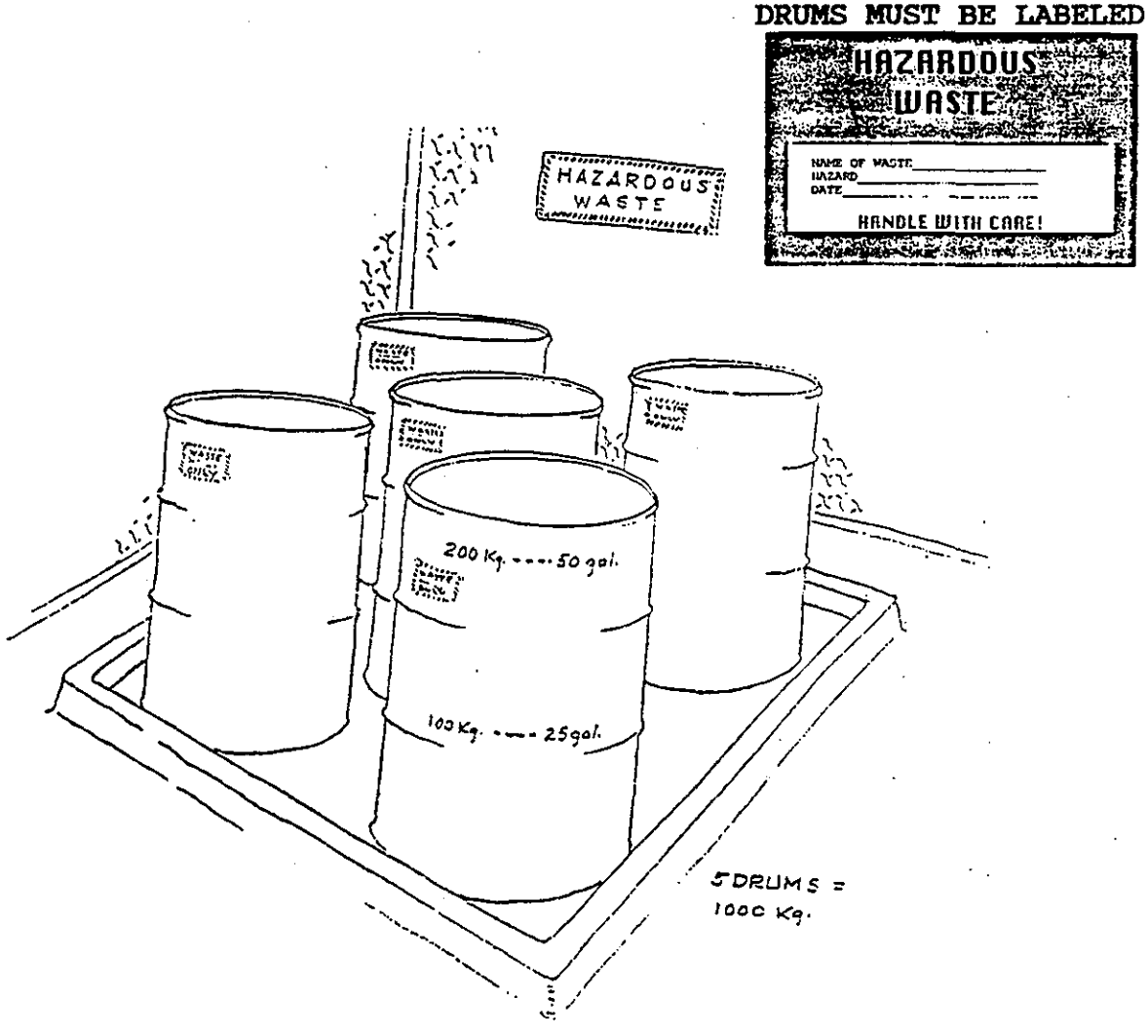
VSQG * Separate containers of incompatible wastes by a berm, dike or similar structure.

VSQG * Each container holding hazardous wastes must be tightly closed throughout the period of accumulation, except when the waste is being added or removed.

* Containers holding ignitable or reactive wastes must be at least 15 meters (50 ft) from the property line. If this is not possible or practical you must store such containers in compliance with all applicable local ordinances and by-laws.

* Inspect your accumulation area at least once a week for any leaking or deterioration of your containers. You must have enough aisle space between your containers to allow for inspections.

DRUMS MUST BE LABELED



Accumulation Time Limits (310 CMR 30.351[5])

As a small quantity generator (SQG), you may accumulate up to 2000 kgs or 4400 lbs in containers, or up to 6000 kgs (approximately 1650 gallons) in tanks for as long as 180 days. You have two upper limits - time and volume. Whichever is reached first determines the date on which you must ship your waste. If both tanks and containers are used to store hazardous waste and/or waste oil, the total waste which can be accumulated at any one time may not be determined by adding the two limits.

Satellite Accumulation (310 CMR 30.351[4])

Additional flexibility is offered by allowing you to accumulate up to 55 gallons of hazardous waste, or one quart of acutely hazardous waste, at each point where you generate your waste, if you meet the following conditions:

- The waste must be generated from a process at the location of the satellite accumulation;
- Each satellite accumulation area can have only one container for each waste stream in use at a time;
- Each satellite accumulation area must be managed by the person who is directly responsible for the process producing the waste;
- The waste must be moved to the main designated accumulation area within three days after the container is full.

Accumulation of Waste Oil in Underground Tanks (including those resting directly on the ground) [310 CMR 30.253(1)(h)]

All underground tanks must have a spill prevention device such as a removable funnel with at least a 12 inch diameter.

- To prevent leaks, single-walled tanks which do not have continuous leak detection capability must be dip-stick tested weekly and tightness tested annually.
- Keep a log of all test results, beginning and ending measurements, variation and average figures, for at least 3 years.
- Report a difference of a month's average greater than 5 gallons (for tanks containing 550 gallons or less) to your DEP regional office.

EMERGENCY PREPARATION AND RESPONSE (310 CMR 30.351(9))

Equipment

To minimize the risk of fire, explosion, or release of hazardous wastes that may contaminate the environment, you are required to have on site, and immediately accessible to your hazardous waste handling area, the following (unless the hazards posed by your wastes do not require one of them):

* an alarm or communication system which can provide emergency instruction to employees;

* a telephone, two-way radio or other device which can summon police, fire or emergency response teams;

* portable fire extinguishers and/or fire control equipment (e.g. foam, inert gas), and spill control/decontamination equipment;

* adequate supply and pressure of water, automatic sprinklers or water sprays, or foam-producing equipment.

All your equipment must be periodically tested and properly maintained so it will work during an emergency.

Prepare Your Employees

You must thoroughly familiarize each of your employees with all the waste handling and emergency procedures that may be needed for each of their jobs. An employee must have immediate access to alarm or communication devices, either directly or through another employee, whenever hazardous waste is being handled. If your operation is at any time being handled by a single employee, that person must have immediate access to a telephone or two-way radio.

For easy movement of employees and emergency equipment, you must maintain adequate aisle space in the area of hazardous waste handling. Mark all exits clearly.

Notify Local Authorities

You must make every reasonable attempt to carry out the following arrangements, in regards to the waste you produce:

* Familiarize your police department, fire department, local boards of health, and any emergency response teams with the hazardous nature of your waste; the layout of your site, including entrances and evacuation routes, and the location where your employees usually work;

* Familiarize local hospitals with the hazards of your waste and the types of injuries that could result from any accidents;

* Obtain agreements with emergency response teams and contractors, and local boards of health;

* If more than one police and/or fire department might respond to an emergency, make an agreement with the department which will have primary emergency authority and specify others as support.

If such arrangements cannot be made, a copy of a signed and dated letter which demonstrates an effort to make these arrangements from you, the generator, to the state or local entity will be considered sufficient.

Emergency Coordinator

You must designate at least one employee to be on call (or on the premises) at all times. This person is the emergency coordinator and is responsible for coordinating all emergency response measures.

Emergency Response

You must have posted next to each telephone near your waste generation area the following:

* name(s) and telephone number(s) of your emergency coordinator(s);

* location(s) of the fire control equipment and any fire alarms;

* telephone number of the fire department, or if there is a direct alarm system, instructions on how to use it;

* evacuation routes, where applicable.

If any of the following emergencies occur:

- Fire - attempt to extinguish the fire and/or call the fire department;

- Spill or leak - contain the flow as quickly as possible and as soon as is practical, clean up the waste and any spil or other materials which may have become contaminated with waste;

- A release (spill or leak) or threat of release, fire or explosion of hazardous waste that may threaten human health or the environment

  - Call the appropriate DEP Regional Office (see page 17) or (617) 292-5500, a 24 hr. automated service line.

  - Call the State Police (508-820-2121) if the incident occurs after 5 p.m., or on a day (weekends or holidays) that DEP is closed,
    and

  - Call the National Response Center's 24-hour toll-free number (1-800-424-8802).

VERY SMALL QUANTITY GENERATOR (VSQG) (310 CMR 30.353)

Registration

If you generate less than 100 kgs a month of hazardous waste, and no acutely hazardous waste, you are eligible to register as a Very Small Quantity Generator (see page 5 for the generation and accumulation limits). To qualify as a Very Small Quantity Generator you must register your waste management plan with DEP (see page 16). If you do not register as a VSQG, you are subject to the more stringent SQG regulations.

Housekeeping Requirements (see pages 8 and 9 for VSQG identified lines)

Treatment/Disposal Options

As a registered VSQG you have the following options for handling your waste:

- You may recycle or treat your waste, provided the process you describe in your registration is acceptable to DEP;
- You may transport your waste to another generator who is in compliance with the regulations and who will count your waste as part of their generation;
- You may transport your waste in your own vehicle to a licensed treatment, storage or disposal facility, or permitted recycling facility, by pre-arrangement;
- You may use a licensed transporter and a manifest form. Use of the manifest requires an ID number. (VSQG's and SQG's of waste oil use a number beginning with the letters MV followed by their 10-digit telephone number.)

Self-Transport Option

As a registered VSQG you may transport your own hazardous waste under the following conditions:

- You transport only the waste that you generated on your premises;
- You do not transport more than 200 kgs at one time;

VSQG (cont.)

- Your waste is in containers that are:

  - no larger than 55 gallons in volume
  - compatible with the waste
  - tightly sealed
  - labeled as "HAZARDOUS WASTE"
  - labeled with the name of the waste and the type of hazard
  - tightly secured to the vehicle

- You do not transport incompatible wastes in the same shipment;

- In the event of a spill or leak of hazardous waste that may threaten human health or the environment you notify DEP or the State Police and the National Response Center, as described on page 13;

- You must have a copy of your registration with DEP in the vehicle;

- You must be in compliance with federal Department of Transportation (617-494-2770) and Massachusetts Department of Public Safety (617-566-4500) requirements.

Record-keeping

If you are not using a licensed transporter but are transporting your own wastes, you do not need an ID number or manifest form. You must, however, keep a record of the type and quantity, as well as the date, of the transport and treatment or disposal of your waste. You will need proof of the receipt of the waste by the facility or generator.

You must keep receipts or manifests of waste shipped and records of waste analysis for at least 3 years, or for the duration of any enforcement action by DEP.

Accumulation Limits

You may accumulate up to 600 kgs (approximately 165 gallons or three 55 gallon drums) of hazardous waste in containers that meet the standards on pages 8-9 with no time limit.

There is no annual compliance assurance fee for Very Small Quantity Generators.

SAMPLE REGISTRATION FORM

for VSQG's and SQG's of waste oil

Massachusetts Department of Environmental Protection - Generator Registration

DEP Region: ☐ NE ☐ CE ☐ SE ☐ WE

I am registering as:

☐ Very Small Quantity Generator of Hazardous Waste (less than 27 gallons/month)
☐ Very Small Quantity Generator of Waste Oil (less than 27 gallons/month) or
☐ Small Quantity Generator of Waste Oil (less than 270 gallons/month)

Name of Company

Mailing Address: *Street* *City/Town* *Zip*

Address where waste is produced

Type of Business: *SIC Code* MV *MV Area Code and Telephone Number*

Hazardous Waste Generated (check):	Gallons per Month Prior to Treatment or Recycling:	Disposal, Storage, Treatment and/or Recycling: (Name Company and address where waste is taken or type of treatment on site of generation)
☐ Waste Oil		
☐ Solvent		
☐ Acid or Alkali		
Other (name):		
☐		
☐		

I CERTIFY UNDER PENALTY OF LAW that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete.

Date *Signed:* *Name of Owner or Operator*

KEEP BEIGE COPY - SEND WHITE COPY TO DEP REGIONAL OFFICE

Department of Environmental Protection
Emergency Response Contacts

To report a release or threat of release of oil or hazardous materials **during regular business hours**, call the Emergency Response Team in the DEP Regional Office that serves the affected community (see below).

DEP Western Region
436 Dwight Street
Springfield, MA 01103

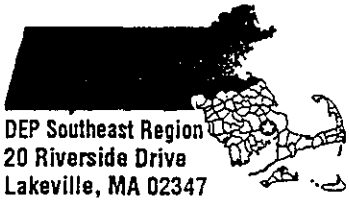
413-784-1100

Adams	Colrain	Hampden	Monroe	Pittsfield	Tyringham
Agawam	Conway	Hancock	Montague	Plainfield	Wales
Alford	Cummington	Hatfield	Monterey	Richmond	Ware
Amherst	Dalton	Hawley	Montgomery	Rowe	Warwick
Ashfield	Deerfield	Heath	Monson	Russell	Washington
Becket	Easthampton	Hinsdale	Mount Washington	Sandisfield	Wendell
Belchertown	East Longmeadow	Holland	New Ashford	Savoy	Westfield
Bernardston	Egremont	Holyoke	New Marlborough	Sheffield	Westhampton
Blandford	Erving	Huntington	New Salem	Shelburne	West Springfield
Brimfield	Florida	Lanesborough	North Adams	Shutesbury	West Stockbridge
Buckland	Gill	Lee	Northampton	Southampton	Whately
Charlemont	Goshen	Lenox	Northfield	South Hadley	Wilbraham
Cheshire	Granby	Leverett	Orange	Southwick	Williamsburg
Chester	Granville	Leyden	Otis	Springfield	Williamstown
Chesterfield	Great Barrington	Longmeadow	Palmer	Stockbridge	Windsor
Chicopee	*Greenfield*	*Ludlow*	*Pelham*	*Sunderland*	*Worthington*
Clarksburg	Hadley	Middlefield	Peru	Tolland	

DEP Central Region
75 Grove Street
Worcester, MA 01605

508-792-7653

Acton	Charlton	Hopkinton	Millbury	Rutland	Uxbridge
Ashburnham	Clinton	Hubbardston	Millville	Shirley	Warren
Ashby	Douglas	Hudson	New Braintree	Shrewsbury	Webster
Athol	Dudley	Holliston	Northborough	Southborough	Westborough
Auburn	Dunstable	Lancater	Northbridge	Southbridge	West Boylston
Ayer	East Brookfield	Laicester	North Brookfield	Spencer	West Brookfield
Barre	Fitchburg	Leominster	Oakham	Sterling	Westford
Bellingham	Gardner	Littleton	Oxford	Stowe	Westminster
Berlin	Grafton	Lunenburg	Paxton	Sturbridge	Winchendon
Blackstone	Groton	Marlborough	Pepperell	Sutton	Worcester
Bolton	Harvard	Maynard	Petersham	Templeton	
Boxborough	Hardwick	Medway	Phillipston	Townsend	
Boylston	Holden	Mendon	Princeton	Tyngsborough	
Brookfield	Hopedale	Milford	Royalston	Upton	



DEP Southeast Region
20 Riverside Drive
Lakeville, MA 02347

508-946-2850

Abington	Dartmouth	Freetown	Mattapoisett	Provincetown	Tisbury
Acushnet	Dennis	Gay Head	Middleborough	Raynham	Truro
Attleboro	Dighton	Gosnold	Nantucket	Rehoboth	Wareham
Avon	Duxbury	Halifax	New Bedford	Rochester	Wellfleet
Barnstable	Eastham	Hanover	North Attleborough	Rockland	West Bridgewater
Berkley	East Bridgewater	Hanson	Norton	Sandwich	Westport
Bourne	Easton	Harwich	Norwell	Scituate	West Tisbury
Brewster	Edgartown	Kingston	Oak Bluffs	Seekonk	Whitman
Bridgewater	Fairhaven	Lakeville	Orleans	Sharon	Wrentham
Brockton	Fall River	Mansfield	Pembroke	Somerset	Yarmouth
Carver	Falmouth	Marion	Plainville	Stoughton	
Chatham	Foxborough	Marshfield	Plymouth	Swansea	
Chilmark	Franklin	Mashpee	Plympton	Taunton	

DEP Northeast Region
10 Commerce Way
Woburn, MA 01801

617-932-7681
617-932-7697

Amesbury	Chelmsford	Hingham	Merrimac	Quincy	Wakefield
Andover	Chelsea	Holbrook	Methuen	Randolph	Walpole
Arlington	Cohasset	Hull	Middleton	Reading	Waltham
Ashland	Concord	Ipswich	Millis	Revere	Watertown
Bedford	Danvers	Lawrence	Milton	Rockport	Wayland
Belmont	Dedham	Lexington	Nahant	Rowley	Wellesley
Beverly	Dover	Lincoln	Natick	Salem	Wenham
Billerica	Dracut	Lowell	Needham	Salisbury	West Newbury
Boston	Essex	Lynn	Newbury	Saugus	Weston
Boxford	Everett	Lynnfield	Newburyport	Sherborn	Westwood
Braintree	Framingham	Malden	Newton	Somerville	Weymouth
Brookline	Georgetown	Manchester-By-The-Sea	Norfolk	Stoneham	Wilmington
Burlington	Gloucester	Marblehead	North Andover	Sudbury	Winchester
Cambridge	Groveland	Medfield	North Reading	Swampscott	Winthrop
Canton	Hamilton	Medford	Norwood	Tewksbury	Woburn
Carlisle	Haverhill	Melrose	Peabody	Topsfield	

Nights, Weekends and Holidays:

☎

Dial 617-292-5500

APPENDIX D

SOLID WASTE MANAGEMENT INFRASTRUCTURE

(A description of the solid waste management infrastructure for the project should be completed by the project manager and inserted here. This description should detail the location and number of solid waste disposal containers at the project and list any contractor services dealing with solid waste or hazardous waste.)

APPENDIX E

THE HAZARDOUS WASTE MANIFEST/RECORD KEEPING

The Project Manager should add any pertinent information they may have regarding the manifest system and record keeping to this appendix. The following record keeping requirements are from the Code of Massachusetts Regulations.

310 CMR

30.330: Record Keeping And Reporting

30.331: Record Keeping

(1) A generator shall keep a copy of each manifest, signed in compliance with 310 CMR 30.314 through 30.316, for three years after the waste was accepted by the initial transporter or until the generator receives a signed copy from the designated facility which received the waste. The generator shall keep, for at least three years from the date the waste was accepted by the initial transporter, the copy of the manifest signed by the owner or operator of the facility which received the waste.

(2) A generator shall keep a copy of each Biennial Report and Exception Report for a period of at least three years from the due date of the report.

(3) A generator shall keep records of any test results, waste analyses, or other determinations made in compliance with 310 CMR 30.302 for at least three years from the date that the hazardous waste was last sent to treatment, storage, disposal, or use at the site of generation or was last transported off the site of generation.

(4) The periods prescribed in 310 CMR 30.331 for keeping records shall be extended automatically for the duration of any unresolved enforcement action regarding the activity in question or as ordered by the Department.

US Army Corps of Engineers

Construction Bulletin

No.	Issuing Office:	Issue Date:	Exp. Date:
93-6	CEMP-CP	5/4/93	31 DEC 95

CEMP-C

Subject: Hazardous Waste Manifest Signature Policy and Procedures

Applicability: DIRECTIVE

1. REFERENCES.

a. Construction Bulletin No. 91-13, 3 Jul 91, subject: Preparation and Signature of Hazardous Waste Manifests and Land Ban Certifications on EPA Superfund Projects.

b. Construction Bulletin No. 91-21, 27 Nov 91, subject: Signature of Hazardous Waste Manifests for EPA Superfund Projects.

c. Construction Bulletin No. 92-1, 29 Jan 92, subject: Asbestos Notification and Waste Shipment Record Requirements.

d. ER 1180-1-6, Construction Quality Management, 1 Apr 91.

e. ER 1110-1-263, Chemical Data Quality Management for Hazardous Waste Remedial Activities, 1 Oct 90.

f. CEMP-RT memorandum dated 30 Apr 93, subject: Signatory Responsibility for Hazardous Waste Manifests and Related Documents - Policy Guidance.

2. PURPOSE.

This Construction Bulletin (CB) establishes policy regarding the signing of hazardous waste manifests and related documents. The Resource Conservation and Recovery Act (RCRA) addresses the "cradle to grave" management of hazardous waste. This includes the generation, storage, treatment, transportation and disposal of hazardous wastes. Implementing regulation (40 CFR 262) requires a generator who transports, or offers for transportation, hazardous waste for offsite treatment, storage, or disposal to prepare and sign a manifest which describes the hazardous waste in detail.

Prepared in accordance with AR 25-30 by HQUSACE Directorate of Military Programs, 20 Mass. Ave NW, Washington D.C. 20314-1000

3. GENERAL.

With the exception of Corps owned facilities, USACE is not considered to be the owner of the hazardous waste it transports as part of the response activities. The customer agency is the generator for purposes of executing hazardous waste manifests. However, due to logistic complexities, a customer may not be able to provide an individual to sign the hazardous waste manifests in a timely manner. The customer may then request the Corps to sign project manifests on their behalf. (Federal regulations permit generators to have agents act on their behalf in signing the manifest forms). When an individual is signing on behalf of a generator which is a legal entity, such as a corporation or a company, the words "on behalf of" should be entered to indicate that the person signing the Generator's Certification is not necessarily accepting liability for violating the federal standards.

4. POLICY.

a. As the leader in DOD's full service environmental restoration efforts, USACE's role is expanding as a result of legislation, evolving missions, and customer needs. Commensurate with this role, it is USACE's goal to develop and implement practices that will facilitate the continuation of quality, comprehensive environmental services. In keeping with this goal, it is USACE's policy, if requested by its customers, to execute on behalf of those customers hazardous waste manifests and related documents. So far, two of our customers have requested USACE assistance in signing manifest forms on their behalf: the Environmental Protection Agency (EPA) and the Farmers Homes Administration. HQUSACE has accepted the delegated responsibility.

b. With regard to manifesting activities at sites where USACE is the owner or responsible agency, e.g., Civil Works facilities or Defense Environmental Restoration Program (DERP)-FUDS, manifest execution and related responsibilities will be performed by USACE.

c. With regard to DERP-Installation Restoration (IR) and Base Realignment and Closure (BRAC) environmental restoration activities, manifest execution and related responsibilities ordinarily belong to the customer (i.e., the installation or the base).

In those instances where the additional cost of sending a qualified USACE representative to a remote location for a small project is unwarranted, the option of requiring the contractor to sign the manifests is permitted and should be considered. This option can only be exercised on a project specific basis after written authorization of the customer and approval of the Chief, Construction Division at the executing district. For FUDS projects, only the approval of the Chief, Construction Division at the executing district is necessary. In all cases, this requirement (of having the contractor sign the manifest) must be incorporated in the contract solicitation prior to contract award.

5. PROCEDURES.

Where USACE personnel execute Uniform Hazardous Waste Manifest forms and related documents, procedures will be adopted by the operating divisions or districts as follows:

a. In the Generator's Name and Mailing Address box (block #3) on the Uniform Hazardous Waste Manifest form, Corps authorized personnel shall enter the following information: "Environmental Protection Agency/Superfund Program", "Farmers Homes Administration", or "DOD (DERP/FUDS)" as appropriate followed by "c/o" and then the name and address of the Corps office that manages the returned manifest forms. In the generator's certification box (block #16), the Corps employee would then sign his or her name, followed by "USACE" after writing or printing the phrase "On-behalf of the Environmental Protection Agency" or "On behalf-of the Farmers Homes Administration" as appropriate. On FUD sites, Corps personnel should follow the same procedure after typing or printing the phrase "On behalf-of the Department of Defense". All other manifest related documents executed by USACE members on behalf of a customer shall be executed by signature followed by USACE after writing or printing the phrase "on behalf of the (name of the customer)".

b. On Corps owned facilities where the Corps is a "generator" of hazardous wastes or is the "Responsible Party", Corps personnel shall enter in block #3 on the manifest form "U.S. Army Corps of Engineers", followed by the name and address of the Corps office that manages the returned manifest forms. In the generator's certification

box (block #16), the Corps authorized employee would sign his or her name after typing or printing the phrase "On behalf of the U.S. Army Corps of Engineers".

c. Corps personnel authorized to execute manifest forms and related documents shall assure compliance with all reporting requirements (e.g., exceptions reports, biennial reports and state reports) as well as follow-on requirements, including the assembly and retention of all appropriate documentation and certifications.

d. Assure that USACE is authorized by its customers to execute hazardous waste manifests and related documents on their behalf before such documents are executed. This authorization is effected through an explicit provision in a Memorandum of Agreement, Inter-Agency Agreement, or correspondence signed by an appropriate agency official* requesting and authorizing USACE to sign on their behalf. The customer request and authorization must acknowledge that the customer retains all responsibilities for the hazardous waste as a generator. This shall extend to the execution of the Hazardous Waste Manifests, Land Disposal Restriction Notification and Certifications, Waste Profile Sheets, and other forms necessary for the completion of manifests for transportation and disposal of hazardous waste. Approval to undertake the delegated responsibility of signing manifest forms and related documents rests with the chief of Construction Division at the executing district. If state statutes or regulations do not permit USACE to sign such documents on behalf of the customer, the Resident Engineer (RE) or other designated USACE representative is to contact the customer for further guidance.

e. All USACE members executing hazardous waste manifests and related documents must receive appropriate training before executing such documents. The minimum required training is specified in the following regulations:

* HQUSACE Office of Counsel advised that EPA's letter of 18 Oct 90 (see reference 1a) requesting and authorizing USACE to execute and certify manifest forms and related documents on their behalf is legally sufficient and that no further documentation or individual project authorization is necessary.

(1) Occupational Safety and Health Act (OSHA), 29 C.F.R. 1910-120;

(2) Resource Conservation and Recovery Act (RCRA), 40 C.F.R. 264.16 and 40 C.F.R. 265.16;

(3) Hazardous Transportation Uniform Safety Act (DOT), 49 C.F.R. 173.1; and May 15, 1992 Final Rule, Federal Register 49 C.F.R. 172.700 (Subpart H-Training); and

(4) Army Regulatory training requirements (AR 55-355).

Additional training may be required by operating divisions or districts. Training can be obtained from within or outside USACE. Regardless of the training source, it is the responsibility of the employing division or district to assure that the training is appropriate and that records of the members' successful completion of the training are appropriately maintained.

f. Only USACE members formally designated and authorized by a division or district commander/deputy commander shall be allowed to execute hazardous waste manifests and related documents. The formal designation and authorization must be in writing and state that the member is within his/her scope of employment when executing such documents.

g. Where USACE members are executing hazardous waste manifests and related documents, the contract under which the removal or remediation is being performed must contain supporting chemistry-related requirements and procedures. These items are imposed by the specifications and addressed by the contractor in a document known as the "Chemical Data Acquisition Plan" (see reference 1e). These plans are site specific guidance for sampling and analyses. They address, among other things, laboratory activities, chemical data documentation, equipment, sampling documentation, quality control, sample custody and shipment, analytical methods and document preparation. The project specific supplement to the QA Plan, developed by the Resident Engineer in accordance with reference 1d, must define the USACE quality assurance role in the manifesting process.

h. It is intended that future contracts shall contain a requirement that hazardous waste manifests and related documents executed by USACE members be supported by contractor submittals prepared, reviewed, and approved by an authorized representative of the contractor. The contractor's employee shall also certify that packaging, labeling, marking and placarding of the waste meet all applicable federal and state regulations, and shall also certify as correct, Land Disposal Restriction Notifications and Certifications, Waste Profile Sheets, and related documents before providing the documents to USACE.

6. To implement the above policy and procedures, HQUSACE (with MRD MCX support) is defining the responsibility of and the course of action to be followed by all parties involved, i.e., HTRW design districts, executing districts and contractors. A complete hazardous waste transportation and disposal check list will be developed for contractors to complete as part of the submittal process. For your information, the Engineer Manual on manifesting is projected to be complete by end of this fiscal year. Previously issued CB's provided you with recommended training sources, Hot Lines, and videotape libraries to assist you in accomplishing your mission.

7. This CB has been coordinated with HQUSACE 's Environmental Restoration Division (CEMP-R); Engineering Division (CEMP-E); Office of the Chief Counsel (CECC-C); Office of the Principal Assistant Responsible for Contracting (CEPR-ZA); and, Operations, Construction and Readiness Division, Directorate of Civil Works (CECW-OC).

CHARLES R. SCHROER
Chief, Construction Division

APPENDIX F

Spill Prevention, Control and Countermeasures Plan (SPCCP), and Spill Contingency Plan for Flood Control Project, incorporated by reference

APPENDIX G

MASSACHUSETTS RECYCLING SERVICES DIRECTORY AND HAZARDOUS WASTE INFORMATION SHEETS

RECYCLING SERVICES DIRECTORY

and Markets Guide for Massachusetts

May 1995

Massachusetts Executive Office of Environmental Affairs
Department of Environmental Protection
Division of Solid Waste Management
One Winter Street, 4th Floor
Boston, MA 02108

The ***Recycling Services Directory*** lists vendors who accept, collect or purchase recyclable materials from Massachusetts communities and businesses. This resource supplements local yellow pages by describing markets for recyclables across the state. The Department of Environmental Protection (DEP) welcomes additions and corrections to either the recyclable material or vendor categories. Please complete and return the attached "update form". Listings are subject to change, and do not represent endorsement by the DEP.

To receive free copies of the ***Recycling Services Directory***, call the DEP InfoLine at 617-338-2255 (from within the 617 area code or outside Massachusetts) or 800-462-0444 (from 413 and 508 area codes) or return the order form on the last page.

Contents:

Printed on 100% Post-Consumer Recycled Paper

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such as aluminum, in return for a portion of the deposit. By state law, carbonated beverages containers must bear 5¢ deposit, redeemable at any retail establishment which sells the containers (so long as it is empty, clean, and uncrushed). Vending machine operators often redeem containers wherever they refill vending machines. Check with the vendor where the beverage was purchased.

FLUORESCENT LAMPS & BALLASTS **Page 11**

See "Miscellaneous Wastes: Fluorescent Fixtures". Fluorescent lamps, mercury vapor lamps and high intensity discharge lamps typically contain elemental mercury in a phosphor powder which coats the lamp interior. The best disposal practice is currently under review at the federal and state levels. Due to the mercury content, fluorescent lamps may exhibit the toxicity characteristic of a hazardous waste. At this time, off-site dismantling is considered the best option. Incineration is the least desirable practice because of the volatility of the mercury.

Fluorescent lighting ballasts have historically contained capacitors impregnated with polychlorinated biphenyls (PCB's). The ballasts, as long as they are intact and not leaking, may be shipped on a bill of lading to a contractor's central location or directly to a ballast recycler. The ballasts become a regulated hazardous waste once they are bulked at a central collection point.

GLASS **Page 5**

See "Aseptic, Bottles and Cans". The glass industry requires that colored and clear glass be separated and clear of all foreign objects. Never try to recycle ceramics (dinner plates), stone, plate glass, light bulbs, gravel, dirt, plastic, or metal with glass. The glass industry identifies glass colors as follows: flint is clear, amber is brown, and emerald is green.

HAZARDOUS WASTES **Not Listed**

Hazardous wastes are either listed in the Hazardous Waste Regulations or possess at least one of four characteristics: ignitability, corrosivity, reactivity or toxicity. For information on hazardous waste regulations and policies, call the DEP Compliance Assistance line at (617)292-5898. For answers to Household Hazardous Waste (HHW) questions, call DEP's HHW Hotline at (800)343-3420. For assistance in ways to minimize hazardous waste, call the Office of Technical Assistance for Toxic Use Reduction at (617)727-3260.

METAL **Page 8**

See "Scrap Metal and White Goods". Ferrous metal will stick to a magnet. Non-Ferrous does not. Most non-ferrous metals retain a significant scrap value. Scrap automobiles account for most of the ferrous metal recycled in Massachusetts; most scrap auto yards will take other ferrous metal as well. Collectors who specialize in non-ferrous metals usually pay cash for moderate quantities of material.

Ferrous examples:	Non-Ferrous examples:
Steel, Cast Iron, "Tin"	*Aluminum, Brass, Copper, Lead*

MOTOR OIL **Page 10**

See "Miscellaneous Wastes: Automotive". By law, automotive stores must accept back the motor oil they sell to individual customers which is accompanied by a receipt. Sears Automotive, Caldor, some Mobil and Exxon stations, and Valvoline Instant Oil Change will take it without a receipt. Call the DEP Used Oil Hotline to learn the nearest drop-off location to you: (617)556-1022.

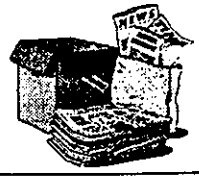
PAPER **Page 6**

Paper recyclers usually require paper to be separated by grade, but many companies will now take all grades mixed together and do the sorting at the plant or mill.

The traditional grades are:

High Grades:	Low Grades:
Computer print-out (CPO)	*Cardboard (OCC)*
White ledger (office paper)	*Newspaper (ONP)*
Colored ledger (office paper)	*Magazines (OMG)*
	Mixed office paper

Waste paper is the only local feedstock available to the 30 paper mills in the state; it is also the largest export (by volume) of the U.S. Recycling a ton of paper saves 17 trees.



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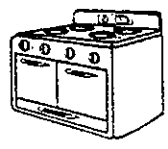
Recycling conserves more than landfill space. It also conserves energy, natural resources, and jobs. Massachusetts industries convert the recyclables you collect into over $600 million in products. By recycling, you contribute to the ten thousand jobs in the state which depend on recycling, and trigger the investments which depend upon a steady supply of recycled materials. THANK YOU FOR RECYCLING!



● ASEPTIC, BOTTLES AND CANS

(See also your yellow pages yellow pages under: "Recycling", "Redemption Centers", or "Rubbish Haulers")

COMPANY NAME	MATERIALS	CITY	TELEPHONE
AAA Recycling Sales & Services	Alum. Glass, Tin	New Bedford	(508) 999 - 9331
A.G. Bettencourt, Inc	Glass	Westport	(508) 636 - 4009
A.W. Martin, Inc.	Glass	New Bedford	(508) 993 - 4359
All-Brands Container Recovery	Alum, Glass, Tin	Wakefield	(800) 439 - 2267
Anchor Glass Container Corp.	Glass - All Colors	Dayville, CT	(203) 774 - 9636
Asian Export, Inc.	Alum. cans, foil	Newton	(617) 332 - 7929
Atlantic Waste Systems, Inc.	Alum,Glass,Tin,Curbside	Lynn	(617) 581 - 2410
Automated Recycling (MRF)	Alum,Glass,Tin,Curbside - commingled	W.Bridgewater	(800) 640 - 7565
Boston Food Coop	Alum,Glass,Tin	Allston	(617) 787 - 1417
Boston Can	Alum,Glass	Boston	(617) 247 - 3120
Brockton Iron & Steel Co.	Alum, Tin Cans	Brockton	(508) 586 - 4640
Browning-Ferris Industries (BFI)	Alum,Glass,Tin,Curbside	Boston	(617) 265 - 0500
Browning-Ferris Industries (BFI) (MRF)	Alum,Glass,Tin,Curbside - commingled	Brockton	(508) 580 - 1511
Browning-Ferris Industries (BFI) (MRF)	Alum,Glss,Tin,Asep,Crbsid - commingled	Hooksett, NH	(603) 669 - 2282
Burlington Recyclers	Glass - All colors	Burlington	(617) 229 - 5790
C.B. Trucking	Curbside	Medway	(508) 533 - 4584
Callahan Trucking	Alum,Glass,Tin,Curbside	Pittsfield	(413) 442 - 8390
Clean Environment Co.	Alum,Glass,Tin,Curbside	N.Billerica	(508) 250 - 4800
Conigliaro Industries	Alum,Glass,Tin	Framingham	(508) 872 - 9668
Container Recycling Alliance	Glass - All Colors	Mansfield	(508) 339 - 6067
Container Svcs.(A Waste Mgt Co.)	Alum,Glass,Tin,Aseptic	Walpole	(508) 660 - 1804
Day's Recycling	Alum,Glass,Tin,Curbside	Greenfield	(413) 772 - 0364
Duseau Trucking	Alum,Glass,Crbside,Aseptc	Hatfield	(413) 586 - 4100
Duseau Waste Industries Inc.	Alum,Glass,Tin,Curbside	Florence	(413) 586 - 4100
E. L. Harvey	Alum,Glass,Tin	Westborough	(800) 321 - 3002
Environmental Action	Alum,Glass,Tin,Curbside	North Adams	(413) 664 - 4936
Foster Forbes	Glass - All Colors	Milford	(508) 478 - 2500
Frank Rubbish Removal	Alum,Glass,Tin,Curbside	Millbury	(508) 865 - 5935
Hudson Trucking	Alum,Glass,Tin	Greenfield	(413) 773 - 9677
Jet-A-Way	Alum,Glass,Tin	Roxbury	(617) 541 - 4000
Laidlaw	Alum,Glass,Tin,Curbside	Revere	(617) 289 - 0500
Maine Beverage Container	Alum,Glass	Portland, ME	(207) 774 - 0735
Mid City Scrap & Salvage	Tin Cans	Westport	(508) 675 - 7831
No. Atlantic Recycling Svcs.	Alum,Glass	North Andover	(508) 682 - 5442
P.E. Allen & Sons	Alum,Tin	Northampton	(413) 584 - 3040
P&T Recycling Services	Alum,Glass,Tin,Curbside	Haverhill	(800) 692 - 0009
Partyka Resource Management	Alum,Glass,Tin,Curbside	Chicopee	(413) 785 - 1581
Patriot Metals	Tin Cans	Worcester	(508) 798 - 3333
Pine Street Inn	Alum, Glass	Boston	(617) 482 - 4944
Prins Recycling Center (MRF)	Alum,Glss,Tin,Asep,Curbside - commingled	Charlestown	(617) 242 - 7746
Recycling Enterprises	Glass	Webster	(508) 949 - 2797
Repak, Inc.	Glass - All Colors	Shirley	(508) 425 - 2399
Resource Recovery Systems Inc.	Alum,Glass,Tin,Aseptic	Essex, CT	(203) 767 - 7057
Springfield Mat'ls Recycl. Facil. (MRF)	Alum,Glss,Tin,Asep,Curbside - commingled	Springfield	(413) 784 - 1100
So.Shore Recycling(Waste Mgt.Co)	Glass	Plymouth	(508) 830 - 0030
Tetra Pak, Northeast Region	Asep-Drnk boxes,Mlk crtns	New York, NY	(212) 551 - 3227
The Master Garbologist	Alum,Glass,Tin,Curbside	New Marlboro	(413) 229 - 3442
Vining Co/Environmental Ideas	Alum,Glass,Steel,Curbside	Stoneham	(617) 279 - 0006
Waste Management of Central MA	Alum,Glass,Tin,Curbside	West Boylston	(800) 698 - 8785
Wood Enterprises	Glass - Clear only	Whately	(413) 665 - 7634

● OFFICE AND COMPUTER SUPPLIES

(See also your yellow pages under: "Computer or Office Supplies", or "Recycling, Toner-Cartridge")

Boston Can	Laser Printer Cartridges	Boston	(617) 247 - 3120
Boston Computer Society	Outdated Computer Equip.	Waltham	(617) 290 - 5700
Copy Inks	Laser Printer Cartridges	Canton	(617) 344 - 2679
Earthworm, Inc.	Laser Printer Cartridges	Somerville	(617) 628 - 1844
EDR, Inc.	Computr&lt.electron.equip	Manchester,NH	(603) 647 - 0655
Easter Seals Disabils.Comptr Prog.	Working Computer Systs.	Worcester	(800) 922 - 8290
East West Educ.Devel.Foundation	Outdated Computer Equip.	Boston	(617) 542 - 1234
Electronics Processing Assocs.	Computers,Electron.Equip.	Lowell	(508) 970 - 2700
Encore Images	Lasr.Printr&Copier Carts.	Marblehead	(617) 631 - 4568
Environmental Toner Cartridge Co.	Lasr,Copr,Fax,Tonr Carts.	Quincy	(617) 479 - 6249

OFFICE AND COMPUTER SUPPLIES (Continued)

Laser Perfect	Laser Printer Cartridges	Peabody	(508) 532 - 4600
Laser-Mate	Laser Cartridges,FaxPaper	Waltham	(617) 894-MATE
LaserSaver	Laser&Copier Toner Carts.	Bridgewater	(508) 697 - 2888
LaserStar	Laser Printer Cartridges	Woburn	(617) 932 - 8667
LaserTone	Laser Printer Cartridges	Wayland	(508) 358 - 5626
Media Recovery Inc.	MagTape,Comp.Ribbns,Cartr	Canton	(617) 821 - 2350
Nashua Corporation	Laser Printer Cartridges	Exeter, NH	(800) 333 - 3439
Omni, Inc.	Computer Keyboards & mice	Lowell	(508) 934 - 5004
Print Recovery Concepts	Ink Ribbons, Pr Cartridges	Waterboro,ME	(800) 397 - 7269
Recycling Technologies Int'l	Laser Printer Cartridges	Springfield	(413) 739 - 8889

● PAPER

(See also your yellow pages under: "Recycling", "Rubbish Haulers", or "Waste Paper")

AAA Paper Recycling	High Grades	Boylston	(508) 987 - 0186
AAA Recycling Sales & Services	All Grades, OCC	New Bedford	(508) 999 - 9331
A.W. Martin, Inc.	All Grades	New Bedford	(508) 993 - 4359
Acme Metals and Recycling	High Grades	Springfield	(413) 737 - 3112
All-Brands Container Recovery	Computer,OCC,News	Wakefield	(800) 439 - 2267
Alternative Services Assocn.	High Grades,News,Mags.	No.Chelmsford	(800) 427 - 5522
American Paper Recycling Corp.	All Grades	Mansfield	(508) 339 - 5551
Automated Recycling	Alum,Glass,Tin,Curbside	W.Bridgewater	(800) 640 - 7565
Atlantic Waste Systems, Inc.	All grades, OCC	Lynn	(617) 581 - 2410
Basic Waste Systems	High Grades, OCC	Medford	(617) 396 - 1177
Bay State Paper Recycling	High Grades, OCC	E. Douglas	(508) 476 - 3212
Berkshire Clean-Way	High Grades, OCC	Dalton	(413) 684 - 0165
Browning-Ferris Industries	All Grades	Boston	(617) 265 - 0500
Browning-Ferris Industries	All Grades	Brockton	(508) 580 - 1511
Callahan Trucking	All Grades	Pittsfield	(413) 442 - 8390
Capital Paper Recycling	High Grades	Plympton	(617) 585 - 4901
Center House	High Grades	Boston	(617) 426 - 3535
Conigliaro Industries	High Grades, OCC	Framingham	(508) 872 - 9668
Container Svcs.(A Waste Mgt.Co)	High Grades	Walpole	(508) 660 - 1804
Corrugated Recycling Inc.	OCC	Weymouth	(800) 427 - 5765
Data Destruction/OPRS	High Grades	Woburn	(800) 762 - 6765
Day's Recycling	All Grades	Greenfield	(413) 772 - 0364
Duseau Trucking	News,Mags,Catalogs,OCC	Hatfield	(413) 586 - 4100
Duseau Waste Industries Inc.	News,Mags,Catalogs,OCC	Florence	(413) 586 - 4100
E. L. Harvey	All Grades	Westborough	(800) 321 - 3002
Earthworm, Inc.	High Grades	Somerville	(617) 628 - 1844
Elm Fibers	All Grades	E. Longmeadow	(413) 567 - 1759
Environmental Action	OCC, News	North Adams	(413) 664 - 4936
Essex Waste Paper Co./P&T	All Grades	Lawrence	(508) 521 - 7419
F.M. Fibers	High Grades	Salem	(617) 242 - 0809
Ginsberg, B.& Co.(A Waste Mgt.Co)	High Grades	Brockton	(508) 583 - 5700
Hanna Paper Recycling	High Grades	Sharon	(617) 784 - 5155
Harry Goodman & Sons	All Grades	Springfield	(413) 785 - 5331
Hudson Trucking	All Grades	Greenfield	(413) 773 - 9677
I. Zaitlin & Sons	All Grades	Woburn	(617) 938 - 0611
Jet-A-Way / Kemble Waste	All Grades	Boston	(617) 541 - 4000
Laidlaw	All Grades	Revere	(617) 288 - 2841
Leominster Recycling	High Grades	Leominster	(508) 534 - 3269
Malden Waste Paper	High Grades	Malden	(617) 322 - 2337
Marcal	All Grades	Elmwood Pk,NJ	(201) 796 - 4000
McGinnis Recycling/City Shred	High Grades,OCC,News	Quincy	(617) 773 - 9901
Miller Recycling Corporation	All Grades	No. Attleboro	(800) 783 - 6766
National Fiber Insulation	Newspaper	Belchertown	(413) 283 - 8747
National Recycling, Inc.	High Grades	Attleboro	(508) 226 - 1700
North Shore Recycled Fibers	All Grades	Weymouth	(617) 337 - 9800
North Shore Recycled Fibers	All Grades	Salem	(617) 289 - 9400
North Shore Recycled Fibers	All Grades	Webster	(508) 943 - 0853
Northeast Recycling Corp	All Grades	Westfield	(413) 568 - 4500
Office Paper Recovery Systems	High Grades	Wilmington	(508) 694 - 1450
P. Allen & Sons	All Grades	Northampton	(413) 584 - 3040
P&T Recycling Services	All Grades	Haverhill	(800) 692 - 0009
Partyka Resource Management	High Grades, OCC	Chicopee	(413) 785 - 1581
Prins Recycling Center	All Grades	Charlestown	(617) 242 - 7746
Samuel Mirsky Corp	All Grades, OCC	New Bedford	(508) 993 - 9988

PAPER (Continued)

Save That Stuff	All Grades	Cambridge	(617) 864 - 0640
Schirmer Paper Corp.	All Grades	Boston	(617) 723 - 5588
Second Chance Recycling	High Grades	Brattleboro,VT	(802) 254 - 9456
Shapiro & Sons,Inc.	All Grades	North Adams	(413) 663 - 6525
Sonoco Waste Paper Recycling	All Grades	Holyoke	(413) 536 - 9080
So.Shore Recycling(Waste Mgt.Co)	OCC, News	Plymouth	(508) 830 - 0030
Spiegel S. Co. (A Waste Mgt.Co)	All Grades, Phonebooks	Avon	(800) 696 - 9921
Springfield Mat'ls Recycl. Facil.	All Grades	Springfield	(413) 784 - 1100
Sterling / C & J Trucking	All Grades,OCC,News	Londonderry,NH	(508) 663 - 7700
The Master Garbologist	OCC	New Marlboro	(413) 229 - 3442
The White Paper Project	High Grades	Boston	(617) 727 - 6223
Turner Trucking	All Grades	Lynn	(617) 595 - 3741
Vel-A-Tran	High Grades	Billerica	(508) 663 - 7266
Vining Co, Enviro. Ideas	All Grades	Stoneham	(617) 279 - 0006
Waste Management of Central MA	All Grades, OCC	West Boylston	(508) 835 - 6001
Waste Systems	High Grades	Cranston	(800) 972 - 4545
Wastepaper Corp of Worcester	All Grades	Webster	(508) 943 - 0727
West Lynn Recycling Co. Inc.	OCC, News	Lynn	(617) 592 - 0378
Wood Enterprises	All Grades	Whately	(413) 665 - 7634

● PLASTIC

(See also your yellow pages under: "Recycling", "Rubbish Haulers", or "Scrap Plastic".)

AAA Recycling Sales & Services	HDPE, PET	New Bedford	(508) 999 - 9331
A.W. Martin, Inc.	HDPE,PET,PS	New Bedford	(508) 933 - 4359
ABC Disposal	PS	New Bedford	(508) 995 - 0544
All-Brands Container Recovery	All Plastic	Wakefield	(800) 439 - 2267
Asian Export Inc.	HDPE,LDPE,PVC,PP,PS	Newton	(617) 332 - 7929
Berkshire Clean-Way	HDPE	Dalton	(413) 684 - 0165
Boston Food Coop	HDPE	Allston	(617) 787 - 1417
Brave New Garden	HDPE	Cambridge	(800) 853 - 2525
Browning-Ferris Industries	HDPE, PET	Brockton	(508) 580 - 1511
Casella Waste Management	HDPE,PET	Rutland, VT	(802) 775 - 9908
Clean Environment Co.	HDPE,PET,PS	No. Billerica	(508) 250 - 4800
Clean Environment Co.	HDPE,PET,PS	Chicopee	(413) 593 - 1306
Conigliaro Industries	HDPE,LDPE,PET,PP,PS	Framingham	(508) 872 - 9668
Denton Plastics, Inc.	HDPE,LDPE,PET,PP,PS,PVC	Portland, OR	(503) 257 - 9945
Diversified Svcs. In Plastics	HDPE,LDPE,PET,PP,PS	Leominster	(508) 537 - 4380
Duseau Trucking	HDPE, PET, PVC	Hatfield	(413) 586 - 4100
Duseau Waste Industries Inc.	HDPE, PET, PVC	Florence	(413) 586 - 4100
E. L. Harvey	HDPE,PET	Westborough	(800) 321 - 3002
Electronics Processing Assocs.	Engring Plastics-ABS,PS	Lowell	(508) 970 - 2700
EnviroPlastics	HDPE	Auburn	(508) 832 - 5095
Free-flow Packaging Corp.	PS	Auburn	(508) 832 - 5369
George Apkin & Sons, Inc.	HDPE,PET,PVC	North Adams	(413) 664 - 4936
Goodwill Industries Plastic	HDPE,LDPE,PVC,PP,PS	Greenfield	(413) 774 - 3040
Jet-A-Way/Kemble	HDPE,PET	Roxbury	(617) 541 - 4000
L. Fine & Company	HDPE,LDPE	Peabody	(508) 532 - 2112
Laidlaw	HDPE,PS	Revere	(617) 289 - 0500
Metropolitan Processed Mat'ls	HDPE,PET,PP,PS,PVC	Somerville	(617) 623 - 3917
N. Atlantic Rec. Ser., Inc	HDPE,PET	North Andover	(508) 682 - 5442
National Polystyrene Recycling	All PS,Fd.Svc.Pkg&Regrind	Bridgeport,NJ	(609) 467 - 9377
North Shore Recycled Fibers	HDPE	Weymouth	(617) 337 - 9800
Nyconn	PET	New York, NY	(718) 392 - 1177
P&T Recycling Services	PET,HDPE,LDPE,PS	Haverhill	(800) 692 - 0009
P.E. Allen & Son	HDPE,PET	Northampton	(413) 584 - 3040
Partyka Resource Management	HDPE,PET,PVC	Chicopee	(413) 785 - 1581
Plastic Resale Corp.	All Plastic	W. Springfield	(413) 739 - 1508
Plastics Recovery Corp.	All Plastic	New Haven, CT	(203) 785 - 0458
Plastic Recyclers Inc.	HDPE	New Bedford	(508) 991 - 8880
Prins Recycling Center	HDPE, PET	Charlestown	(617) 242 - 7746
Pro Pel Plastics	HDPE,LDPE,PET	Whately	(413) 665 - 3379
PTI America Co.	HDPE, PET, PVC	Berlin	(508) 838 - 0223
Recycling Enterprises	PET	Oxford	(508) 949 - 2797
RST Reclaiming, Inc.	Computer Plastic	Lowell	(508) 453 - 3425
Samuel Mirsky Corp	HDPE	New Bedford	(508) 993 - 9988
Somers Sanitation	PS	E.Windsor, CT	(203) 623 - 2070
So.Shore Recycling(Waste Mgt.Co)	HDPE,PET	Plymouth	(508) 830 - 0030

PLASTIC (Continued)

Springfield Mat'ls Recycl. Facil.	HDPE, PET, PVC	Springfield	(413) 784 - 1100
The Master Garbologist	HDPE,PET,PP,PVC	New Marlboro	(413) 229 - 3442
Vining Co, Enviro. Ideas	HDPE	Stoneham	(617) 279 - 0006
Waste Management of Central MA	PET	West Boylston	(508) 835 - 6001
wTe Recycling/Star	HDPE,PET	Bedford	(617) 275 - 6400
Wood Enterprises	HDPE	Whately	(413) 665 - 7634

● SCRAP METAL AND WHITE GOODS

(See also your yellow pages under: "Junk", "Recycling", "Rubbish Haulers", or "Scrap Metal")

A.W. Martin, Inc.	Non-Ferrous	New Bedford	(508) 933 - 4359
Acme Auto Salvage	Auto Parts	No.Dartmouth	(508) 993 - 7362
Alco Recycling Company	Non-Ferrous	Edison, NJ	(908) 225 - 9550
Anestis Scrap	Ferrous&Non-Ferrous, Auto	Somerville	(617) 666 - 3405
Atlas Metals, Inc.	Non-Ferrous	Somerville	(617) 666 - 8440
Bay State Scrap	Ferrous & Non-Ferrous	Worcester	(508) 753 - 3926
Berlin Auto Parts	Auto Parts	Berlin	(508) 838 - 2991
Berkshire Clean-Way	Ferrous & Non-Ferrous	Dalton	(413) 684 - 0165
Bokser's Junk Shop	Non-Ferrous	Medford	(617) 395 - 8810
Brockton Iron & Steel Co.	Ferrous & Non-Ferrous	Brockton	(508) 586 - 4640
Burlington Recyclers	Ferrous & Non-Ferrous	Burlington	(617) 229 - 5790
Castle Metal Co.	Non-Ferrous	Boston	(617) 482 - 7332
Champagne Auto Exchange	Auto Parts	Auburn	(508) 832 - 6669
Day's Used Auto Parts	Auto Parts	Millbury	(508) 756 - 2850
Dupre's Salvage/Recycle	Auto Parts	No. Brookfield	(508) 867 - 9898
Empire Scrap Metals, Inc.	Non-Ferrous	Worcester	(508) 752 - 7750
Enos Metals	Ferrous & Non-Ferrous	Taunton	(508) 824 - 5425
Faulkner Scrap Metal	Ferrous & Non-Ferrous	Worcester	(508) 791 - 4802
Framingham Salvage	Ferrous & Non-Ferrous	Framingham	(508) 872 - 4393
Frank Miller & Son	Non-Ferrous	No. Attleboro	(508) 695 - 0211
General Metals and Smelting	Non-Ferrous	Roxbury	(617) 442 - 2050
George Apkin & Sons, Inc.	Ferrous & Non-Ferrous	North Adams	(413) 664 - 4936
Ginsberg, B. & Co.	Non-Ferrous	Boston	(617) 426 - 5698
Goldstein Scrap Metal	Non-Ferrous	Worcester	(508) 754 - 5711
H. Cohen & Sons	Ferrous & Non-Ferrous	South Boston	(617) 542 - 3300
J. Broomfield & Sons	Ferrous & Non-Ferrous	Providence,RI	(401) 785 - 2040
J. P. Carroll	Auto Parts	Lexington	(617) 861 - 6060
James Grant Co.	Ferrous & Non-Ferrous	Readville	(617) 361 - 2716
John C. Tombarello & Sons	Ferrous&Non-Ferrous, Auto	Lawrence	(508) 682 - 5226
Kramer Scrap Division	Ferrous&Non-Ferrous, Auto	Greenfield	(413) 774 - 3103
Lenox Junk	Non-Ferrous	Dorchester	(617) 288 - 2841
Leominster Recycling	Non-Ferrous	Leominster	(508) 534 - 3269
Leroy & Co., Inc.	Non-Ferrous	Worcester	(508) 752 - 1790
M. Burnstein Co, Inc	Ferrous & Non-Ferrous	Chelsea	(617) 884 - 7700
M. Kaplan & Co.	Non-Ferrous	Everett	(617) 389 - 4775
M. Sugarman, Inc	Ferrous & Non-Ferrous	Quincy	(617) 479 - 1637
ML Norwood Auto Recycling	Auto Parts	North Grafton	(508) 839 - 5934
Mid City Scrap & Salvage	Ferrous & Non-Ferrous	Westport	(508) 675 - 7831
National Auto Clearing House	Auto Parts	Worcester	(508) 755 - 6978
Nissenbaum Auto	Auto Parts	Somerville	(617) 776 - 0194
P.E. Allen & Sons	Non-Ferrous	Northampton	(413) 584 - 3040
P.K. Contracting, Inc.	Ferrous	Braintree	(617) 843 - 0225
Partyka Resource Management	Ferrous & Non-Ferrous	Chicopee	(413) 785 - 1581
Patriot Metals	Auto Parts	Worcester	(508) 798 - 3333
Philip Lewis & Sons	Non-Ferrous	Roxbury	(617) 442 - 1250
Prolerized New England	Ferrous	Everett	(617) 389 - 8300
Prospect Iron and Steel	Ferrous & Non-Ferrous	Somerville	(617) 666 - 3405
R&R Industries	Ferrous & Non-Ferrous	Springfield	(413) 733 - 2118
Reisner, WM Corp	Ferrous & Non-Ferrous	Clinton	(508) 365 - 4585
Samuel Mirsky Corp	Non-Ferrous	New Bedford	(508) 993 - 9988
Shapiro & Sons,Inc.	Ferrous & Non-Ferrous	North Adams	(413) 663 - 6525
Somerset Junk	Non-Ferrous	Somerville	(617) 623 - 9579
Starr Scrap Metal, Inc.	Non-Ferrous	Worcester	(508) 791 - 0086
State Line Scrap Co.	Ferrous & Non-Ferrous	So. Attleboro	(508) 399 - 8300
Steel Searing & Baling Corp.	Ferrous & Non-Ferrous	Worcester	(508) 799 - 2133
Tewksbury Industries	Ferrous&Non-Ferrous, Auto	Tewksbury	(508) 851 - 5946
The Master Garbologist	Ferrous	New Marlboro	(413) 229 - 3442
Turner Trucking	Ferrous	Lynn	(617) 595 - 3741

SCRAP METAL AND WHITE GOODS (Continued)

Universal Salvage	Ferrous & Non-Ferrous	Salem	(508) 744 - 0124
West Lynn Recycling Co. Inc.	Ferrous	Lynn	(617) 595 - 3741
William F. Sullivan Co, Inc	Ferrous & Non-Ferrous	Holyoke	(413) 539 - 9664
Willimansett Waste Co.	Non-Ferrous	Willimansett	(413) 532 - 5315
Winthrop Steel	Non-Ferrous, Auto Parts	Fitchburg	(508) 343 - 3627
Wood Recycling, Inc.	Ferrous & Non-Ferrous	Peabody	(508) 535 - 4144

WHITE GOODS:

A.W. Martin, Inc	White Goods	New Bedford	(508) 993 - 4359
American Metals Rec., Inc.	White Goods	East Freetown	(508) 763 - 9325
Appliance Disposal Recyc.Industs.	White Goods, Freon Svcs.	Lowell	(508) 459 - 4447
Brockton Iron & Steel	White Goods	Brockton	(508) 586 - 4640
Curboy Salvage	White Goods	Sturbridge	(508) 347 - 9650
George Apkin & Sons, Inc.	White Goods	North Adams	(413) 664 - 4936
John C. Tombarello & Sons	White Goods	Lawrence	(508) 682 - 5226
Kramer Scrap Division	White Goods	Greenfield	(413) 774 - 3103
Linsky Recycling, Inc	White Goods	Gloucester	(508) 283 - 1893
Mid City Scrap & Salvage	White Goods	Westport	(508) 675 - 7831
Millis Used Auto Parts	White Goods	Millis	(508) 376 - 8700
P.K. Contracting, Inc.	White Goods, Freon Svcs.	Braintree	(617) 843 - 0225
P&T Recycling Services	White Goods	Haverhill	(800) 692 - 0009
Partyka Resource Management	White Goods	Chicopee	(413) 785 - 1581
R & R Industries	White Goods	Springfield	(413) 733 - 2118
Shapiro & Sons,Inc.	White Goods	North Adams	(413) 663 - 6525
State Line Scrap, Inc.	White Goods	So. Attleboro	(508) 399 - 8300
Tewksbury Metals	White Goods	Tewksbury	(508) 851 - 5948
The Master Garbologist	White Goods	New Marlboro	(413) 229 - 3442
Trotta & Son Rubbish Removal	White Goods	Worcester	(508) 798 - 2271
Turner Trucking	White Goods	Lynn	(617) 595 - 3741
West Lynn Recycling Co. Inc.	White Goods	Lynn	(617) 592 - 0378
William F. Sullivan Co, Inc	White Goods	Holyoke	(413) 539 - 9664

● TEXTILES

(See also "scrap wool" or "scrap cotton" in the yellow pages.)

AAA Recycling Sales & Services	Textiles	New Bedford	(508) 999 - 9331
E. Butterworth & Co., Inc.	Textiles,cuttings,remnts	Dracut	(508) 957 - 3500
Ecosmith	Textiles	New Boston,NH	(603) 487 - 2339
ERC Wiping Products	Mill ends,machinery waste	Canton	(617) 821 - 6300
Goodman Wiping Cloth Co., Inc.	Textiles,mill ends,remnts	Auburn, ME	(207) 784 - 5779
Industrial Wiper & Paper Corp.	*Textiles*	*Chelsea*	(617) 884 - 5550
Jeffco Fibres Inc.	Textiles	Webster	(508) 949 - 0288
Massachusetts Export	Textiles	Worcester	(508) 752 - 5496
Salvation Army	Textiles	Saugus	(800) 626 - 1122
Shapiro & Sons,Inc.	Textiles	North Adams	(413) 663 - 6525

● WOOD, CONSTRUCTION AND DEMOLITION (C&D) DEBRIS

(See also your yellow pages under: "Demolition", "Rubbish", "Trees", "Wood Waste")

A-1 Plumbing & Heating Supplies	Plumbg&Heatg mat'ls/fxtrs	Somerville	(617) 625 - 6140
American Reclamation	Asphalt,Brick,Concr,C & D	Charlton	(508) 248 - 3777
Ashland Sand & Stone/SCF Mat'ls	Concrete	Ashland	(508) 881 - 7263
B & D Pallet Company	Pallets	Westfield	(413) 568 - 9624
Bardon Trimount	Asphalt,Brick,Concr,Soil	Burlington	(617) 221 - 8400
Berkshire Paving	Asphalt, Brick, Concrete	Springfield	(413) 732 - 8207
Boro Sand & Gravel	Asphalt, Brick, Concrete	No. Attleboro	(800) 649 - 2676
Boston Crushing	Concrete	Malden	(617) 324 - 0040
Brox Industries	Asphalt, Tree Stumps	Dracut	(508) 454 - 9105
Building Block	Cabnts,doors,sinks,lumbr	Roxbury	(617) 442 - 8917
Cardi Construction	Asphalt, Concrete, Soil	Warwick, RI	(401) 739 - 8300
Comchip	Pallets	Springfield	(413) 737 - 3070
Deloury Construction Co., Inc.	Asphalt, Brick, Concrete	Andover	(508) 475 - 8153
Domtar Gypsum	Gypsum Wall Board	Newington,NH	(603) 433 - 8000
Duseau Waste Industries Inc.	C&D,Concrete,Brick,Cln Wd	Florence	(413) 586 - 4100
E.H. Perkins Construction	Concrete	Sterling	(508) 358 - 6161
E.L. Harvey & Sons	Concrete	Westborough	(508) 366 - 4123
Energy Answers Corp.	Demolition Wood	Pittsfield	(413) 443 - 7373

WOOD, CONSTRUCTION AND DEMOLITION (C&D) DEBRIS (Continued)

Environmental Action	C & D Debris	North Adams	(413) 664 - 4936
Fuel Technologies, Inc.	C & D Debris	Lewiston, ME	(207) 783 - 2941
Gagliarducci Construction	Asphalt, Brick, Concrete	Springfield	(413) 543 - 6978
Goodale Construction	Asphalt, Brick, Concrete	Oak Bluffs	(508) 693 - 0768
Heffron Materials	Asphalt, Brick, Concrete	Wilmington	(508) 658 - 3602
Hood Sand & Gravel	Asphalt, Brick, Concrete	Uxbridge	(508) 278 - 3008
J.H. Maxymillian Inc.	Asphalt, Brick, Concrete	Pittsfield	(413) 499 - 3050
Jacques Construction Inc.	Asphalt, Brick, Concrete	South Hadley	(413) 539 - 9331
James Grant Co.	C & D Debris, Soil	Readville	(617) 361 - 2716
Jet-A-Way	C & D Debris	Roxbury	(617) 541 - 4000
John J. Paonessa & Co.	Asphalt, Brick, Concrete	Medford	(617) 395 - 7007
Kimbal Sand Company	Asphalt, Brick, Concrete	Blackstone	(508) 883 - 1799
Labrie Asphalt & Construction	Asphalt, Brick, Concrete	Easthampton	(413) 527 - 6906
Lawrence-Lynch	Asphalt, Brick, Concrete	Falmouth	(800) 352 - 7188
Lopes Construction	Demo. Wood, Concrete	Taunton	(508) 824 - 4834
Lorusso Corporation	Asphalt, Brick, Concrete	Plainville	(508) 695 - 3252
Lou Guarino Construction	C & D Debris, Concrete	Canton	(617) 821 - 0170
Mario Susi & Son	Asphalt, Brick, Concrete	Boston	(617) 265 - 4525
Mayflower Sand & Gravel	Asphalt, Brick, Concrete	Plymouth	(800) 660 - 6404
Miles River Sand & Gravel	Asphalt, Brick, Concrete	Ipswich	(508) 356 - 2290
Oakham Sand & Gravel	Asphalt, Brick, Concrete	Oakham	(508) 882 - 5286
Olde Bostonian	Bldg/plumbg mat'ls/fxtrs	Dorchester	(617) 282 - 9300
Ondrick Construction Co.	Asphalt, Brick, Concrete	Chicopee	(413) 592 - 2565
O'Donnell Sand & Gravel	Asphalt, Brick, Concrete	Kingston	(617) 585 - 6531
P.J. Keating Company	Asphalt	Lunenburg	(800) 446 - 3380
Pacella Development Corp.	Concrete	Westford	(508) 692 - 3532
Palmer Paving	Concrete	Palmer	(413) 283 - 8354
Partyka Resource Management	Asphalt,Concr.Soil,Cln Wd	Chicopee	(413) 785 - 1581
PetroFiber Corporation	Clean Wood,Pallets,Fencng	Bedford, NH	(603) 626 - 6736
Refuse Recycling Corp.	Demolition Wood	Northampton	(413) 584 - 6392
T.L. Edwards	Asphalt, Brick, Concrete	Avon	(508) 587 - 6953
Tilcon Mass	Asphalt	Acushnet	(508) 992 - 3542
Vining Co/Environmental Ideas	C & D Debris	Stoneham	(617) 279 - 0006
Vining Disposal Service	Concrete	Medford	(617) 279 - 0006
W.J. Graves	Asphalt, Brick, Concrete	Baldwinville	(508) 939 - 5568
Wood Recycling, Inc.	C & D Debris, Wood	Peabody	(508) 535 - 4144
Wood Waste of Boston	Demolition Wood	Everett	(617) 387 - 3700

● YARD WASTE AND LEAF COMPOSTING

(These companies service organic yard waste only -- see "Lanscaping" in the yellow pages. For other WOOD, see "Wood, Construction and Demolition Debris" above.)

Agresource	Leaves, Yard Waste	Merrimac	(508) 346 - 9286
Arthur Schofield, Inc.	Wood, Leaves, Stumps	Wayland	(508) 358 - 2503
Browning-Ferris Industries	Leaves, Yard Waste	Fall River	(508) 678 - 8860
Cape Resources Company	Wood, Leaves, Stumps	Marstons Mills	(508) 428 - 2613
Cat Ridge Farm	Wood, Stumps	East Sandwich	(508) 833 - 0732
Cotton Tree Service, Inc.	Wood, Tree Stumps	Northampton	(413) 584 - 9104
Duseau Waste Industries Inc.	Leaves, Grass, Yard Waste	Florence	(413) 586 - 4100
Earthgrow Compost Services	Leaves, Grass, Yard Waste	Framingham	(508) 788 - 0623
Fine Tree Farm	Leaves,Yard Waste	Rehoboth	(508) 226 - 3734
Halchak Corporation	Leaves, Wood, Stumps	Winchester	(617) 729 - 7077
High Acres Associates	Leaves,Yard Waste	Hopkington	(508) 435 - 5927
Horacio Furtado Landscaping	Leaves,Yard Waste	New Bedford	(508) 996 - 6677
J.M. Cook Co.	Wood, Yard Waste, Stumps	Mendon	(508) 634 - 3300
Laidlaw	Wood, Stumps, Leaves	Revere	(617) 289 - 0500
Lion's Head Organics	Leaves,Yard Waste	Braintree	(617) 356 - 2122
New England Recycling Co.	Wood, Stumps	Taunton	(508) 822 - 4345
Organic Recycling Inc.	Leaves,Yard Waste	RI+Melrose,MA	(401) 884 - 1455
Pine Meadow Landscape	Leaves	Canton	(617) 575 - 9119
Recycled Wood Products	Wood, Leaves	Woburn	(617) 933 - 3818
S & J Exco, Inc.	Wood, Leaves	South Dennis	(508) 398 - 9206
Sam White and Sons	Leaves,Yard Waste	Medfield	(508) 359 - 7291
Westwood Nurseries	Leaves,Yard Waste	Westwood	(617) 329 - 4822

● MISCELLANEOUS WASTES: Automotive, Batteries, Fluorescent Fixtures, Paint & Photographic

(See also "Junk Dealers" or "Tire Recycling" in the yellow pages.)

AUTOMOTIVE: ANTIFREEZE, CAR BATTERIES, MOTOR OIL & FILTERS, TIRES, UNWANTED VEHICLES

A&A Waste Oil	Motor Oil	Waltham	(617) 899 - 3348
Acme Auto Salvage	Car Batteries	No. Dartmouth	(508) 993 - 7362
Acme Metals and Recycling	Car Batteries	Springfield	(413) 737 - 3112
Ad Tire Recycling, Inc.	Tires	Quincy	(617) 773 - 8846
American Waste Oil	Motor Oil	Pawtucket, RI	(401) 861 - 6243
Atlas Metals, Inc.	Car Batteries	Somerville	(617) 666 - 8440
Berlin Auto Parts	Car Batteries	Berlin	(508) 838 - 2991
Bill Murphy's Waste Oil	Antifreeze, Motor Oil	Woburn	(617) 933 - 4928
Brockton Iron & Steel	Car Batteries	Brockton	(508) 586 - 4640
Connecticut Waste Oil, Inc.	Motor Oil, Oil Filters	Meriden, CT	(203) 235 - 8889
Curboy Salvage	Car Batteries	Sturbridge	(508) 347 - 9650
E. L. Harvey	Car Batteries	Westborough	(800) 321 - 3002
Ecology Tire Co.	Remould Tires	Acton	(800) 597 - 3342
Exeter Energy Project	Tires	Sterling, CT	(203) 564 - 7000
Exide Corporation	Car Batteries	Reading, PA	(215) 378 - 0500
Framingham Salvage	Car Batteries	Framingham	(508) 872 - 4393
George Apkin & Sons, Inc.	Car Batteries	North Adams	(413) 664 - 4936
Goldstein Scrap Metal	Car Batteries	Worcester	(508) 754 - 5711
J. P. Carroll	Car Batteries	Lexington	(617) 861 - 6060
Kidney Foundation Car Campaign	Unwanted cars & trucks	Dedham	(800) 542 - 4001
Kramer Scrap Division	Car Batteries	Greenfield	(413) 774 - 3103
Lenox Junk	Car Batteries	Dorchester	(617) 288 - 2841
Linsky Recycling, Inc	Car Batteries, Tires	Gloucester	(508) 283 - 1893
Mass. Adoption Resource Exchg.	Unwanted vehicles-all types	Boston	(617) 536 - 0362
Mayflower Salvage Co.	Motor Oil	Raynham	(508) 880 - 6002
Millis Used Auto Parts	Tires	Millis	(508) 376 - 8700
Murphy's Waste Oil Service	Antifreeze, Motor Oil &Filters	Woburn	(617) 272 - 4211
Nissenbaum Auto	Car Batteries	Somerville	(617) 776 - 0194
Oil Energy Recovery Inc.	Motor Oil	Stow	(508) 897 - 6040
Oxford Tire Recycling	Tires	Plainfield,CT	(800) 873 - 8473
Partyka Resource Management	Car Batteries, Tires	Chicopee	(413) 785 - 1581
Philip Lewis & Sons	Car Batteries	Roxbury	(617) 442 - 1250
Pine State Recycling	Tires	Nobleboro, ME	(207) 832 - 6514
R & R Industries	Tires	Springfield	(413) 733 - 2118
Raynham Tire Recycling, Inc.	Tires	Pembroke	(617) 829 - 8840
Recyc. For Gold-Ma.Spec.Olympics	Unwanted vehicles-all types	Hathorne/Dnvrs	(508) 774 - 1501
Routhier & Sons, Inc.	Tires	Littleton	(508) 772 - 4251
Shapiro & Sons,Inc.	Car Batteries	North Adams	(413) 663 - 6525
Springfld.Resrc.Recov.(John Foley)	Tires	Agawam	(413) 785 - 5120
State Line Scrap, Inc.	Car Batteries	So. Attleboro	(508) 399 - 8300
Tewksbury Metals	Car Batteries	Tewksbury	(508) 851 - 5948
The Tire Pond	Tires	North Haven,CT	(203) 288 - 5604
Tires Into Recycl.Energy Sources	Tires	Eliot, ME	(207) 439 - 5974
Tolman Construction Services	Oil Filters	Baldwinville	(800) 231 - 4873
William F. Sullivan Co, Inc	Car Batteries	Holyoke	(413) 539 - 9664

BATTERIES (OTHER THAN CAR):

Global Recycling Technologies	All types	Stoughton	(617) 341 - 6080
Mercury Refining Co.	All types	Albany, NY	(800) 833 - 3505
Nat'l Electric. Manufact'rs Assn	Info. on battery recycling	Washington,DC	(202) 457 - 8400
Recharg.BatteryRecycl.Corp.(RBRC)	Nickel-Cadmium Rechargeble	Upper Saddle River,NJ	(800) 822 - 8837
Springfld.Resrc.Recov.(John Foley)	Button batts. (10-towns)	Agawam	(413) 785 - 5120
Wheelabrator (Patrick Scanlon)	Button batts. & Ni-Cads. (contract towns)	Hampton, NH	(800) 682 - 0026

FLUORESCENT FIXTURES:

Advanced Environmental Technol.	Fluorescent Lamps	Marlboro	(508) 460 - 9960
Alta Resource Mgmt. Services	Fluor. Lamps, Ballasts	Springfield	(800) 730 - 2582
Bluestone Energy Services	Fluorescent Ballasts	Braintree	(617) 356 - 8865
Environmental Waste Technology	Fluorescent Ballasts	Newton	(617) 332 - 2877
Ensquare, Inc.	Fluorescent Ballasts	Somerville	(617) 776 - 7320
FulCircle Ballast Recyclers	Fluorescent Ballasts	Cambridge	(617) 876 - 2229
Global Recycling Technologies	Fluor/Merc.Lamps,Ballasts	Stoughton	(617) 341 - 6080
Mercury Refining Co., Inc.	Fluor. Lamps, Ballasts	Albany, NY	(800) 833 - 3505
Nowick Environmental Assocs.	Fluorescent Ballasts	Springfield	(413) 747 - 1611
Salesco Systems USA	Fluorescent Ballasts	Stoughton	(617) 344 - 4074

PAINT:			
Durant Paint & Wallpaper	Latex & Oil paints,stains	Revere	(617) 289 - 1400
The Green Paint Co.	Latex & Oil Base Paint	Manchaug	(508) 476 - 1992
PHOTOGRAPHIC:			
Safety Kleen	Photographic Waste and Film	Canton	(617) 828 - 5445

● IMPORTANT END-MARKETS, MRF's* & MILLS

The following companies represent END-MARKETS accepting only DENSIFIED shipments of large quantities. Trucking services must be arranged with a 3rd party shipper.

American Tissue	All Grade Paper	Baldwinville	(508) 939 - 5359
Anchor Glass	Clear and Brown Glass	Dayville, CT	(203) 774 - 9636
Ash Trading Corp.	High Grade Paper	Albany, NY	(518) 463 - 6666
Automated Recycling	Materials Recovery Facility	W.Bridgewater	(800) 640 - 7565
Bay State Paper Co.	Cardboard (OCC)	Hyde Park	(617) 361 - 3500
Browning-Ferris Industries	Materials Recovery Facility	Brockton	(508) 580 - 1511
Browning-Ferris Industries	Materials Recovery Facility	Hooksett, NH	(603) 669 - 2282
Cascades Diamond, Inc.	Newspaper	Thorndike	(413) 283 - 8301
Crane & Co., Inc.	High Grade Paper	Dalton	(413) 684 - 2600
CRinc. Material Recovery	Materials Recovery Facility	Johnston, RI	(401) 944 - 1501
Crocker Technical Papers	High Grade Paper	Fitchburg	(508) 345 - 7771
Erving Paper Mills (Tissue)	High Grade Paper	Erving	(508) 544 - 2711
Esleeck Manufacturing	High Grade Paper	Turners Falls	(413) 863 - 4326
Federal Paperboard	All Grade Paper	Sprague, CT	(203) 823 - 3650
Foster Forbes	Clear and Brown Glass	Milford	(508) 478 - 2500
James River Corp/Adams/Pepperell	High Grade Paper	Adams	(413) 743 - 0290
Merrimac Paper Co.	High Grade Paper	Lawrence	(508) 683 - 2754
Newark Paperboard/Haverhill	All Grade Paper	Haverhill	(508) 373 - 4111
Newark Paperboard/Lawrence	All Grade Paper	Lawrence	(508) 687 - 7100
Newark Paperboard/Natick	All Grade Paper	Natick	(508) 653 - 9100
Perkit Folding Box	Low Grade Paper	Mattapan	(617) 361 - 1057
Plastican	Pelletized HDPE	Leominster	(508) 537 - 4911
Prins Recycling Center	Materials Recovery Facility	Charlestown	(617) 242 - 7746
PureTech	PET, Custom PET	Springfield	(413) 736 - 0830
Resource Recovery Systems Inc.	Materials Recovery Facility	Centerbrook,CT	(203) 767 - 7057
Resource Recycling Technols.(RRT)	Materials Recovery Facility	Vestal, NY	(607) 798 - 7137
Rising Paper Co.	High Grade Paper	Housatonic	(413) 274 - 3345
Roland-Fitchburg Paper	High Grade Paper	Fitchburg	(508) 345 - 0309
Seaman Paper Co.	High Grade Paper	Baldwinville	(508) 939 - 5356
Sonoco Products Co.	All Grade Paper	Holyoke	(413) 536 - 4546
Southworth Co.	High Grade Paper	W.Springfield	(413) 732 - 5141
Springfield Mat'ls Recycl. Facil.	Materials Recycling Facility	Springfield	(413) 784 - 1100
Statler Tissue	High Grade Paper	Augusta, ME	(207) 623 - 4731
Stevens & Thompson Tissue	Baled High Grade Paper	Greenwich, NY	(518) 692 - 2212
Strathmore Paper Co.	High Grade Paper	Woronoco	(413) 568 - 9111
Texon USA	High Grade Paper	Russell	(413) 862 - 3652
WTE Corporation	Materials Recovery Facility	Bedford	(617) 275 - 6400
Westfield Paper/Lee/Russell	High Grade Paper	Russell	(413) 862 - 3636

* MRF = Materials Recovery/Recycling Facility

Other Sources of Recycling Market Information

- **Aluminum Association** (202) 862-5100
  Washington, DC
  Provides market information & promotes aluminum recycling.

- **American Forest & Paper Association (AFPA)**
  Paper Information Center (202) 463-2700
  Washington, DC
  Provides market information, publications, videos and other resources about the paper industry.

- **American Plastics Council** (800) 2-HELP-90
  Washington, DC
  Provides market information on recyclable plastics and offers technical assistance for establishing recycling programs.

- **American Recycling Markets** (800) 267-0707
  Ogdensburg, NY
  Call to order a Guide (subscription fee) with information on recycled products, recycled material markets, and recycled products purchasing.

- **Aseptic Packaging Council** (202) 333-5900
  Washington, DC
  Promotes recycling of drink boxes and milk cartons, and provides resources for setting up school and residential recycling programs.

- **Center for Ecological Technology (CET)**
  Pittsfield & Northampton, MA (413) 445-4556
  Provides Western Mass. with information, education, and services on recycling, energy and waste management.

- **Composting Council** (703) 739-2401
  Alexandria, VA
  Provides information, educational materials and resources on composting.

- **Container Recycling Institute** (202) 797-6839
  Washington, DC
  Provides recycling information for all types of beverage containers and technical assistance on ways to reduce container and packaging waste.

- **Council for Textile Recycling** (301) 656-1077
  Bethesda, MD
  Provides educational and resource information for recycling textiles or purchasing recycled textile products.

- **Earthworm, Inc.** (617) 628-1844
  Somerville, MA
  Provides information, education and guidance on recycling programs for institutions, schools and residents.

- **E-Call, The Ecology Hotline** (800) 800-6881
  Boston, MA **within (617) REC-YCLE**
  Hotline service that provides updates on the latest recycling information for every city and town in Mass.

- **Environmental Defense Fund** (800)CALL-EDF
  New York, NY
  Refers callers to sources of recycling information by zip code.

- **Fundamental Action to Conserve Energy (FACE)**
  Fitchburg, MA (508) 345-5385
  Provides conservation information on energy and recycling issues in North Central Mass.

- **Glass Packaging Institute** (202) 887-4850
  Washington, DC
  Provides market information and promotes the recycling of glass containers.

- **Institute of Scrap Recycling Industries**
  Washington, DC (202) 737-1770
  Information on all types of scrap recycling.

- **MassRecycle** (617) 338-0244
  Boston, MA
  A statewide coalition dedicated to promoting waste reduction, reuse and recycling in Mass. Publishes a newsletter with Mass. market information.

- **National Electrical Manufacturers Assocation**
  Washington, DC (202) 457-8400
  Information on source reduction and recycling of batteries.

- **National Office Paper Recycling Project**
  U.S. Conference of Mayors (202) 293-7330
  Washington, DC
  Publications on paper grades, office paper recycling, and purchasing of recycled papers.

- **National Recycling Coalition** (202) 625-6406
  Washington, DC
  A national coalition dedicated to recycling, source reduction, composting, market development and buy recycled programs. Publishes a newsletter with national market information.

- **National Solid Wastes Management Association - N.E. Region** (508) 650-0224
  Natick, MA
  Information on solid waste and recycling.

- **Northeast Resource Recovery Association**
  Concord, NH (603) 224-6996
  A cooperative for the marketing of recyclables. Provides market information, education, and technical assistance about recycling for its members.

- **Northeast Industrial Waste Exchange**
  Syracuse, NY (315) 422-6572
  Publishes a quarterly "Listings Catalog" and has an on-line catalog, both of which serve to match waste generators with waste users in the Northeast.

Other Sources of Recycling Market Information (Continued)

- **Paper Matcher: A Directory of Paper Recycling Markets (AFPA)** **(212) 340-0600**
  New York, NY
  A directory of paper markets in the U.S. which includes mills, paper dealers and recycling centers.

- **Polystyrene Packaging Council**
  Washington, DC **(202) 371-5269**
  Provides market information, educational and resource materials about polystyrene recycling.

- **Scrap Tire Management Council**
  Washington, DC **(202) 408-7783**
  Provides market and resource information about scrap tire recycling.

- **Steel Recycling Institute** **(508) 266-1847**
  Northeast Regional Office
  Boxboro, MA
  Promotes steel recycling and provides educational materials to assist in program implementation.

- **Waste Cap of Massachusetts** **(617) 236-7715**
  Boston, MA
  Provides business-helping-business recycling services and education at no cost.

Periodicals on Recycling:

■ BioCycle	(215) 967-4135
■ Fibre Market News	(800) 456-0707
■ Garbage	(718) 788-1700
■ Paper Stock Report	(216) 923-8042
■ Recycled Paper News	(703) 642-1120x116
■ Recycling Times	(202) 659-4613
■ Recycling Today	(800) 456-0707
■ Resource Recycling	(503) 227-1319
■ Waste Age	(202) 861-0708
■ Waste Dynamics-Northeast	(202) 624-1442

Massachusetts Regional Recycling Districts

- ***Carver-Marion Wareham Regional Refuse District***
  Town Hall, 2 Spring Street
  Marion, MA 02738
  CONTACT: Ray Pickles, (508) 748-3550

- **Eastern Hampshire Refuse District**
  c/o Amherst Town Hall
  Amherst, MA 01002
  CONTACT: Karen Bouquillon, DPW, (413) 256-4050

- **Franklin County Solid Waste Management District**
  324 Wells St.
  Greenfield, MA 01301
  CONTACT: Bob Rottenberg, (413) 772-2438

- Greater **New Bedford** Regional Refuse **Management District**
  Dartmouth Town Hall, Room 214
  400 Slocum Road
  North Dartmouth, MA 02747
  CONTACT: Edith DeMello, (508) 993-2604

- ***Martha's Vineyard Regional Refuse Disposal District***
  P.O. Box 2067
  Edgartown, MA 02539
  CONTACT: Charles Noonan, (508) 627-4501

- **Northern Berkshire Solid Waste Management District**
  18 East St.
  Adams, MA 01220
  CONTACT: Christine Derby, (413) 743-8208

- **Orange/Athol Solid Waste District**
  Lake Mattawa
  Orange, MA 01364
  CONTACT: Bob Andrews, (508) 544-8555

- **Southern Berkshire Solid Waste Management District**
  P.O. Box 235
  Sheffield, MA 01257
  CONTACT: Susanna Leigh, (413) 229-3353

Massachusetts Regional Recycling Associations

- **Anawan Region Solid Waste Committee**
  Attleboro, Berkeley, Easton, Foxboro, Mansfield, Norton, Rehoboth, Seekonk, Somerset, Swansea, Taunton
  CONTACT: Michael Van Splinter, 155 Gilbert St., Mansfield, MA 02048, (508)339-9865.

- **Cape Cod Commission (Marketing Collective)**
  Barnstable, Bourne, Brewster, Chatham, Dennis, Eastham, Falmouth, Harwich, Mashpee, Orleans, Provincetown, Sandwich, Truro, Wellfleet, Yarmouth
  CONTACT: David Hall, Waste Management Coordinator, 3225 Main St., Barnstable, MA 02630, (508)362-3828.

- **Central MA Resource Recovery Committee (CMRRC) (Marketing Collective)**
  Auburn, Grafton, Holden, Leicester, Millbury, Northboro, Oxford, Rutland, Shrewsbury, Southboro, Webster, Westboro, West Boylston, Worcester
  CONTACT: Bob Fiore, Worcester DPW, 20 East Worcester St., Worcester, MA 01604, (508)799-1430.

- **Coalition for North Central Waste Management (CONCEWM) (Marketing Collective)**
  Ashby, Ayer, Clinton, Gardner, Groton, Harvard, Hubbardston, Lunenburg, Pepperell, Petersham, Phillipston, Princeton, Shirley, Sterling, Templeton, Townsend, Westminster, Winchendon
  CONTACT: Don Leistikow, 28 Maple St., Ayer MA 01432, (508)772-3490.

- **Eastern Massachusetts Recycling Association (EMRA)**
  48 communities in the Route 128/95 area belong to this organization.
  CONTACT: Don Marshall, P.O. Box 12, Bedford, MA 01730, (617)275-0637.

- **Hilltown Resource Management Cooperative**
  Ashfield, Chesterfield, Cummington, Goshen, Hatfield, Huntington, Middlefield, Plainfield, Westhampton, Williamsburg, Worthington
  CONTACT: Eric Weiss, Coordinator, P.O. Box 630, Williamsburg, MA 01096, (413)268-3845.

- **North Central Consortium**
  Ashby, Ashburnham, Gardner, Hubbardston, Petersham, Princeton, Templeton, Townsend, Winchendon
  CONTACT: Edward Wirtanen, Board of Health, City Hall, Rm. 29, Gardner, MA 01440, (508)630-4013.

- **Millis Consortium (Marketing Collective)**
  Ashland, Dedham, Foxborough, Framingham, Franklin, Holliston, Hopedale, Hopkinton, Mansfield, Medfield, Medway, Millis, Natick, Needham, Norfolk, Norwood, Sherborn, Walpole, Westwood, Wrentham, Upton
  CONTACT: Robin Chapell, Town Hall, 135 School St. Walpole, MA 02081, (508)660-7320.

- **Northeast Regional Recycling Committee (NERRC)**
  Amesbury, Boxford, Georgetown, Groveland, Haverhill, Ipswich, Merrimac, Middleton, Newbury, Newburyport, Rowley, Salisbury, Topsfield, West Newbury
  CONTACT: Karen Sheridan, 10 Sheffield Rd., Boxford, MA 01921, (508)887-5519.

- **North Shore Regional Recycling Committee (Marketing Collective)**
  Beverly, Boxford, Chelsea, Danvers, Essex, Everett, Gloucester, Hamilton, Ipswich, Lynn, Lynnfield, Marblehead, Melrose, Middleton, Nahant, Peabody, Reading, Revere, Rockport, Salem, Saugus, Swampscott, Topsfield, Wenham, Wilmington, Winthrop
  CONTACT: Rebecca Curran, Chair, 7 Widger Rd., Marblehead, MA 01944, (617)659-4909.

- **South Central Recycling Association of Massachusetts (SCRAM)**
  Brimfield, Brookfield, East Brookfield, Hardwick, Leicester, New Braintree, North Brookfield, Spencer, Sturbridge, Ware, Warren, West Brookfield
  CONTACT: John Alphin, 27 Ashley Rd., North Brookfield, MA 01535, (508)867-9491.

- **South Shore Regional Refuse Disposal Board (Marketing Collective)**
  Cohasset, Duxbury, Hanover, Hingham, Hull, Marshfield, Norwell, Rockland, Scituate, Weymouth
  CONTACT: Ken Pelletier, Marshfield DPW, 870 Moraine St., Marshfield, MA 02050, (617)834-5559.

- **Western & Central Massachusetts Materials Recycling Facility (Marketing Cooperative)**
  102 communities in western and central Massachusetts.
  CONTACT: Steve Ellis, DEP, 436 Dwight St., Springfield, MA 01103, (413)784-1100 Ext. 239.

Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of Environmental Protection

William F. Weld
Governor
Daniel S. Greenbaum
Commissioner

GUIDELINES FOR PROCESSING WHITE GOODS

Many older electrical appliances, such as refrigerators, washing machines, air conditioners and electric ranges, collectively called "white goods," contain capacitors, lighting ballasts or refrigerants which can be harmful to our health and the environment. Although the federal government banned the production of polychlorinated byphenyls (PCBs) in 1979, capacitors and lighting ballasts may contain PCBs, a known carcinogen and a regulated hazardous waste when disposed. Refrigerants found in freezers, refrigerators and air conditioners contain chlorofluorocarbons (CFCs) which are harmful to the ozone layer. When these appliances are moved in bulk, crushed, baled, or shredded without first removing the capacitors and refrigerants, PCBs and CFCs may be released to the air or soil.

The best management practice will ensure that white goods are not crushed or baled prior to removal of capacitors, ballasts or refrigerants. The preparation of discarded white goods for bulking may be done by a municipality, an appliance dealer, or a processor. White goods are now banned from Massachusetts solid waste landfills and combustion facilities. Through recycling, the materials value can be recovered. The following guidelines are recommended in order to assist in the preparation of the discarded white goods for recycling. Reduction of the levels of PCBs in processed white goods to below 50 parts per million will permit the handling and recycling of white goods residues as solid waste, not hazardous waste.

PCB Regulations:

Massachusetts hazardous waste management regulations require that any waste containing greater than 50 parts per million PCBs must be handled, stored, transported, treated and disposed of as a hazardous waste. Residues from white goods which are crushed or shredded with their capacitors intact typically contain some quantity of PCBs, often in excess of 50 parts per million.

CFC Regulations:

As of July 1, 1992 individuals servicing and disposing of air conditioning and refrigeration equipment are prohibited from knowingly venting refrigerant into the atmosphere. If refrigerants are recycled or reclaimed, they are not considered hazardous waste under federal or state law. Regulations governing the removal and

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recycling of CFC refrigerants are under development at the Environmental Protection Agency (EPA) in Washington and not anticipated to be final until winter 1992-1993. The equipment certification requirement is expected to go into effect January 1, 1993 and technicians certification requirement, July 1, 1993. For further information, contact Fred Weeks of EPA, Region I in Boston at (617) 565-3266.

Guidance for management of white goods (prior to bulking):

1. Determine whether you will provide a PCB capacitor, lighting ballast and refrigerant removal service. If you offer this service:

a. Train your employees to identify and remove PCB capacitors, lighting ballasts and refrigerants from white goods. (Removal of CFCs requires use of special equipment.*)

b. Inspect every white good prior to processing to ensure that every PCB capacitor and lighting ballast has been removed and the CFCs collected.

c. Manage those PCB capacitors and lighting ballasts which test greater than 50 parts per million PCBs as hazardous waste. For information about these requirements, contact the Compliance Assistance line of the DEP Hazardous Waste Management Program at (617) 292-5898. Ask for the Summary of Requirements for Small Quantity Generators and List of Licensed Transporters.

2. If the shredder determines that the supplier of the white goods must remove all PCB capacitors, lighting ballasts and refrigerants:

a. Suppliers should be required to sign a statement saying that they have inspected each white good, have removed all capacitors, lighting ballasts and refrigerants, and that they understand that PCBs are regulated as a hazardous waste in Massachusetts and that there are significant penalties for improper handling of PCBs. Records should be retained for at least three years.

b. If the supplier is a municipality, please refer to: White Goods Management in Massachusetts: Questions and Answers for Municipal Waste Management Officials, which is available from the Solid Waste Management Program, DEP, (617) 292-5960.

* For additional information about CFC removal:

Directory of Certified Refrigerant Recovery/Recycling Equipment
available from: Air-Conditioning & Refrigeration Institute
1501 Wilson Blvd, Suite 600, Arlington, Virginia 22209

Prepared by the Massachusetts Department of Environmental Protection 7/92
[A Revision of the 1988 Interim Guidelines for Processing White Goods]

Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of Environmental Protection

William F. Weld
Governor
Daniel S. Greenbaum
Commissioner

Policy Number HW 93-02

Policy for the Management of Used Oil Filters

Summary

DEP recommends the recycling of used oil filters as the preferred waste management option since it is the most environmentally protective alternative, minimizes to the greatest extent possible a generator's CERCLA liability, and furthers the goals of waste reduction, reuse and recycling. However, filters that are not destined for recycling are exempt from hazardous waste regulation if, as a minimum, the filter is punctured and hot drained for a minimum of twelve hours. Otherwise undrained used oil filters are a fully regulated hazardous waste.

Regulatory Background

In March of 1990 the USEPA promulgated the Toxicity Characteristic Rule(TC) which expanded the number and type of hazardous waste constituents beyond those that were regulated under the existing E.P. Toxicity Rule. The TC Rule includes twenty five new hazardous waste constituents, and a new leaching procedure called the Toxicity Characteristic Leaching Procedure(TCLP). In November of 1991 the DEP promulgated the TC Rule verbatim and codified it in 310 CMR 30.125(B).

With addition of the twenty-five hazardous waste constituents the TC Rule brought into regulation as hazardous waste many previously unregulated wastes including some types of used oil and some items contaminated with used oil. During its initial implementation, the regulatory status of used oil filters came into question since limited testing indicated occasional failure for lead and benzene. However, it remained unclear as to whether used oil filters would fail categorically.

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On May 20, 1992, EPA issued its Final Rule on the Listing of Used Oil in the Federal Register(57,FR,21524). EPA stated that based upon analytical testing results, non-terne plated filters that are first punctured and hot drained for twelve hours will categorically pass the Toxicity Characteristic Leaching Procedure(TCLP), and are therefore categorically exempt from management as a RCRA hazardous waste. "Hot drained" means the filter is drained at a temperature ranging between near engine operating temperature and room temperature(60F). Data obtained by EPA indicates that the optimum drain time is twelve hours, since draining for a longer period will not significantly increase the amount of oil removed. This procedure will typically result in the removal of approximately fifty percent of the liquid oil.

In addition, EPA further ruled that terne-plated filters are categorically hazardous waste since they will always fail the TCLP for lead. Terne plated filters have a metal casing composed of an alloy of lead and tin, and as a category represent a minority of the filters annually manufactured. EPA has indicated that manufacturers will phase-out terne plated filters during the 1993 calendar year. In practice it is very difficult to differentiate non-terne plated filters from terne plated filters since there are no apparent physical differences.

Furthermore, in its May 20, 1992 ruling EPA states that this exemption is a conditional exemption based upon compliance with specific disposal management practices. Specifically, these practices are puncturing the filter anti-drain back valve or the filter dome end and hot draining; hot draining and crushing; dismantling and hot draining; or any other equivalent of hot draining method that will remove oil. This exemption and the required management practices are codified in 40 CFR Part 261.4(b)15, effective July 1, 1992.

Regulatory Approach

Since a typical used oil filter contains approximately twelve ounces or more of free flowing waste oil, the filter and oil in its entirety is a listed state-regulated hazardous waste pursuant to 310 CMR 30.131(i.e., waste oil(MA01)). According to 310 CMR 30.140(2)(a) a hazardous waste once generated remains a hazardous waste irrespective of constituent concentration, or, in other words, there is no "deminimus" concentration below which a listed hazardous waste ceases to be a hazardous waste. However, DEP may exercise regulatory flexibility with "state-only" waste, as provided in M.G.L. c.21C, S4: "(c) provisions for waiver by the department for any waste which the department determines is insignificant as a potential hazard to public health, safety, welfare or the environment." The approach presented today utilizes

this flexibility to define "deminimus" as applied to used oil filters in an attempt to strike a balance between environmental protection and regulatory management that is consistent with the degree of risk posed by the wastestream and that is enforceable across a broad spectrum of used oil filter generators.

Recently, both the DEP and the EPA have been evaluating management options for various types of what can be called "consumer items" that do not typically warrant the full control of RCRA hazardous waste management system, but do require some level of environmentally protective management standards. The approach that is generally evolving is one of "contingent" management. That is, when certain management practices are followed, the waste in question will be considered exempt from hazardous waste regulation; however if the prescribed management practices are not followed then the "contingent" management exemption does not apply and the waste must be managed as a hazardous waste. In the case of used oil filters, if the prescribed management practices aimed at minimizing the final concentration of waste oil are followed, then the "deminimus" concentration has been reached and the used oil filter is no longer a hazardous waste.

Accordingly, it is DEP's policy that used oil filters managed according to any one of the following contingent management practices are nonhazardous waste and therefore can be managed as solid waste. However, used oil filters that are not managed according to the contingent management procedures are hazardous waste and must be managed according to the requirements of 310 CMR 30.000. The following are prescribed contingent management options: (a)puncture the anti drain-back valve or dome end of filter and hot drain for twelve hours, (b)drain and crush filters to a point where no free flowing oil remains in the crushed filter, (c)drain and dismantle filters. To the greatest extent possible waste oils shall be collected in their liquid form for subsequent reuse, recycling, treatment or disposal in accordance with 310 CMR 30.000. If any one of the procedures described in (a) through (c) above is followed, then the filter or its parts can be disposed of as a solid waste.

The above notwithstanding, **the DEP strongly recommends the recycling of used oil filters.** Full recycling is the most environmentally protective waste management option, minimizes to the greatest extent possible, the generator's long term CERCLA liability, and furthers the goals of waste reduction, reuse and recycling. Many of the largest used oil filter generators currently dispose of their filters via established used oil recyclers in a belief that the "up front" costs for proper waste management are minimal in comparison to potential CERCLA site cleanup costs. In fact, several Massachusetts companies have recently gotten into the

business of used oil filter recycling, and, based upon DEP inspectional review, offer a very well documented waste tracking and disposal process that appears to be both environmentally protective and legally defensible. For additional information about these companies call the Hazardous Waste Information Line at (617)292-5898.

This policy does not relieve generators of used oil filters from regulatory responsibility contained in any other applicable State or Federal law or regulation. It is incumbent upon the generators of used oil filters to handle their waste at all times in a manner that is protective to public health, safety and the environment, and including appropriate cleanup of any releases to the environment or workplace caused by the handling of used oil filters.

Please direct any questions regarding this policy to James D. Miller, (617)292-5574.

Steven A. DeGabriele Date 5/17/93

Steven DeGabriele, Acting Director
Division of Hazardous Materials

5/5/93

Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of Environmental Protection

William F. Weld
Governor
Daniel S. Greenbaum
Commissioner

92-01

BUREAU OF WASTE PREVENTION
DIVISION OF HAZARDOUS WASTE
POLICY FOR DISPOSAL OF LIGHTING BALLASTS FROM FLUORESCENT LIGHTS CONTAINING PCB IMPREGNATED CAPACITORS

The utility companies and EPA have initiated a program to replace existing lighting ballasts which historically have contained capacitors impregnated with polychlorinated biphenyls ("PCBs") with ballasts which are more energy efficient. Lighting ballasts generally consist of a housing unit which contains a capacitor, wire and asphalt material. Under this program, contractors remove and collect the old lighting ballasts. The Department of Environmental Protection ("Department") acknowledges that the replacement ballasts generally do not contain PCBs. The Department has developed this policy in an effort to encourage recycling and waste minimization practices prior to disposal of the replaced lighting ballasts. The Department's policy for the proper handling, storage, transport and disposal of lighting ballasts is described in the following paragraphs.

The Department has information that leads it to assume that capacitors found in existing lighting ballasts contain PCBs greater than 50 ppm, and therefore such capacitors, when separated from the lighting ballasts, are identified as hazardous waste pursuant to 310 CMR 30.131, and must be managed as a hazardous waste in accordance with 310 CMR 30.000. A hazardous waste transporter must be used to transport the PCB capacitors or ballasts that contain PCB capacitors if such items are intended for disposal. In addition, such items must be disposed of at a licensed hazardous waste treatment, storage or disposal facility if they are being disposed of in Massachusetts. Out of state disposal must be in compliance with the laws of the state where disposal occurs.

01/14/92

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Under this policy, the Department will consider a contractor's central receiving location the site of hazardous waste generation. Accordingly, the Department will not require the use of a licensed hazardous waste transporter and manifest for transport of intact non-leaking lighting ballasts to the contractor's central location for subsequent processing (removal of capacitors) or accumulation provided that all such ballasts and/or components are subsequently properly transported off-site in accordance with 310 CMR 30.000, either as a hazardous waste for disposal, or as a regulated recyclable material for recycling. If any of the ballasts and/or capacitors are leaking, they must be managed as a hazardous waste. A hazardous waste manifest shall not be used for transport of non-leaking lighting ballasts to the contractor's central location unless such location is a treatment, storage or disposal facility. A licensed hazardous waste transporter and manifest MUST be used and the waste disposed of as a hazardous waste if the ballasts and/or capacitors are leaking. If the capacitors are being disposed of in another state, the generator must comply with that state's requirements for disposal of PCB capacitors.

Under this policy the contractor becomes the generator of record if the intact, non-leaking lighting ballasts are transported to the contractor's central location, and as such the contractor must obtain a site specific Environmental Protection Agency (EPA) Identification Number for that central location. If the PCB capacitors are separated from the ballasts at that central location, the contractor must register for the hazardous waste generator status which appropriately reflects the quantity of PCB capacitors which the contractor typically generates each month. If the contractor simply stores the ballasts and does not separate the PCB capacitors prior to disposing of the ballasts as a hazardous waste, the contractor must estimate his generation rate based on the weight of the entire ballast and then register for the appropriate hazardous waste generator status. The contractor must base the accumulation start date for the intact ballasts or separated capacitors on the date the ballasts are received at the contractor's central location.

All generators are responsible for determining if the waste they generate is hazardous waste. To determine if the asphalt contained in the ballast meets the Toxicity Characteristic of hazardous waste, an analysis consisting of a composite sample of the asphalt material from several ballasts may be tested according to the Toxicity Characteristic Leaching Procedure (TCLP) described in 310 CMR 30.125B. If the asphalt waste stream is consistent, the Department believes a one-time analysis is sufficient to determine the Toxicity Characteristic. If the asphalt material fails the Toxicity Characteristic, then it must be disposed of as a hazardous waste. The generator may also apply for a recycling permit for the asphalt material. Applicability of such permits will be decided on

a case-by-case basis by the Department. Otherwise, the ballasts, without the PCB capacitors, may be disposed of as a solid waste if the asphalt tests non-hazardous.

The Department reserves the right to modify or withdraw this policy at any time should additional information require such action.

Questions should be addressed to Victoria Phillips at (617) 292-5812.

Effective Date: 1/16/92

Steven A. DeGabriele
Acting Director, Division
of Hazardous Waste